March 2002 Guide to

ALBERTA'S COMPETITIVE ELECTRICITY INDUSTRY

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INTRODUCTION

Alberta's competitive electricity industry is evolving according to plan, perhaps better. However, at the beginning of 2001 we reached the crucial point in a long and planned-out process at the same time that we were seeing record high prices in both the natural gas and electricity markets. These events were not due to restructuring, but nonetheless strongly affected Albertans' ideas about it. The stage was set for misinformation and misperceptions.

In general, there was a lack of understanding among consumers as to how gas and electricity rates were set under the former system.

Heightened prices, changes to utility bill information and government cost assistance programs sparked interest in utility operations overall and electricity in particular. The unique combination of product/service/system that had long been taken for granted was thrust into the limelight. For what may have been the first time, people began asking about how electricity is priced and related topics such as...

Quality

Electricity is unlike most consumer goods because it has no shelf life. It cannot be created, packaged and warehoused by the producer, shipped to a wholesaler and then stored and displayed by a retailer until a consumer chooses to purchase it. It is not even like other utilities. Natural gas, for example, is a compressible fluid that can be stored in tanks or pipelines to augment the supply when demand is high or production is low.

Electricity is produced in real time as customers demand it. There is a complex administration network that reviews and anticipates customer requirements throughout the day and calls on the generation necessary to meet fluctuating demand. The bottom line is: machines and appliances depend on a stable, consistent, measured supply of electric energy. The system must ensure that enough power is steadily available to meet the needs of consumers.

Reliability

Alberta's electricity consumers have long been served by a mix of privately owned and municipally owned utilities. When communities were small and isolated, generation, transmission and distribution were coordinated as a single entity, leading to a system based on three integrated monopoly utilities, each given both a right and an obligation to serve a particular geographical area. As the demand for power grew, required investments were recovered by the utility companies at rates reviewed and approved by either a provincial regulator or municipal authorities.

Over time, technology and systems evolved to allow the coordinated management of generation, transmission and distribution across the entire Alberta Integrated Electrical System (AIES). Today, the electric system in Alberta is part of an interconnected grid encompassing Alberta, B.C. and the western United States.

There has never been a generation blackout in Alberta. However, outages at the transmission and distribution levels do occur. They are usually local in both cause and effect: lightning strikes, birds sitting in certain spots on transformers, or vehicles running into a substation or switching equipment may temporarily shut down a neighbourhood.

Deregulation

The *Electric Utilities Act*, which came into effect on January 1, 1996, and the subsequent amendments of 1998 established the broad framework for the electric industry in the future. Now, the **risks** and **rewards** of electricity supply are being shouldered by businesses willing to compete for the opportunity to supply the province's growing demand for power. Albertans are no longer required to pay rates that assure cost recovery for monopoly utility companies.

Advances in small-scale generation means generating units no longer have to be massive in order to achieve economies of scale. Independent power producers can effectively compete with massive utility generator units, new supply for the AIES can come on-line faster, and businesses can take control of their energy costs by supplying their own power needs. The combination of more competitors and more supply should cause prices to be lower than that which would be necessary under continued regulation.

The *Act* also brings retail competition to the electricity marketplace. Albertans are not tied to a particular power provider because of where they are. Nor are they obliged to cover the costs of power companies regardless of how efficient, innovative or well-managed the organization may - or may not - be. Businesses and homeowners can comparison shop, and as retail competition heats up, electricity prices will inevitably go down.

How It All Comes Together

The purpose of the Guide to Alberta's Competitive Electricity Industry is to present the new market in a non-technical, easy-to-read format. The material is organized in the same order that power flows from generator to consumer, beginning with a market model illustration and working through each of the steps in the process.

Accompanying each section are Frequently Asked Questions developed with the help of over 160,000 Albertans: those that called Government's toll-free Alberta Connects line to take advantage of the information services provided by the Department of Energy.

Readers interested in more detail are encouraged to visit the following Web sites administered by the Department of Energy:

www.energy.gov.ab.ca

www.customerchoice.com

www.ActionOnEnergy.com

A COMPETITIVE MARKET

The Market Model | Legislation

Alberta
ALBERTA'S ELECTRICITY INDUSTRY
Alberta
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Exporters
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HOW WE USE – AND PAY FOR – ELECTRICITY

The basic unit of electric power is a **watt**. The higher the wattage, the more power the electrical device will draw when "on." For example, light bulbs are available in 60-watt, 100-watt and 150-watt ratings, depending on the desired brightness of the light emitted.

Of course, how long that bulb or other device is operating also determines the amount of electricity used. The standard **measurement** of electricity includes both the **amount** and **duration** of power used. This standard is the **kilowatt hour (kWh)**, the amount of energy consumed by a load of 1,000 watts operating steadily for one hour.

For example:

1 standard light bulb @ 100 watts for 10 hours = 1 kilowatt hour
10 light bulbs @ 100 watts each for 1 hour = 1 kilowatt hour

Here's how the use of household appliances may impact residential electricity bills.

ELECTRICITY USE	AVERAGE USE	AVERAGE MONTHLY COST @ 6¢ / kWh Regulated Rate Option energy charge
100 Watt bulb	6 hours/day	$ 1.10
Microwave Oven	20 minutes/day	.70
30-inch range	2 hours/day	3.60
New Refrigerator top mount freezer, 18 cu. ft.	Continuous	3.40
Old Refrigerator top mount freezer, 17 cu. ft. circa 1988	Continuous	7.25
Clothes dryer	8 loads/week	4.25
Clothes washer (eg. heating water)	8 loads /week	.50
Outdoor Hot Tub heating pump	8 hours/day	 27.00 5.40
Computer & printer	3 hours/day	1.28
Television: 26" colour	4 hours/day	1.45
Furnace Fan	Normal heat cycle	3.95

Source: EPCOR

- The production of electrical power, or **generation capacity**, is measured in **megawatts (MW)**, units of 1,000 kilowatts. A generator with capacity of one megawatt produces one megawatt hour when it runs consistently for one hour. Thus, if it runs consistently for a year (24 hours x 365 days) it produces 8,760 megawatt hours (8,760,000 kWh) in a year. That's enough power to meet the annual consumption needs of about 1,100 homes.

Examples of Electricity Use

CONSUMER TYPE	AVERAGE USE
Average Alberta residence	600 kWh/month
A city block consisting of 20 houses	13,000 kWh/month
Convenience store	2,200 kWh/month
Farm	1,500 kWh/month
12-story office tower	300,000 kWh/month
High rise apartment	90,000 kWh/month
Elementary school	21,250 kWh/month
Seniors lodge	30,000 kWh/month
Greenhouse	50,000 kWh/month
Hospital	1,875,000 kWh/month
Large industrial	32,500,000 kWh/month
City of Red Deer	42,050,000 kWh/month

- At present, Alberta's installed capacity exceeds 11,000 megawatts (MW), 600 MW came on line in 2001, of this about 9,500 MW is available to the Alberta interconnected system.
- This past winter, our peak demand as reported by the Power Pool of Alberta was 7,959 MW – up from 7,785 MW in 2000.
- Projects totalling another 6,000 MW of new generation are under development over the next few years.
- The **Regulated Rate Option**, which may vary among providers, is available to **all** consumers using less than 250,000 kWh per year, and to consumers on Farm Rate and Irrigation Rate classification regardless of consumption.

Aggregators

In Alberta's new electric industry structure, economies of scale can work for any consumer group or association whose members agree to "aggregate" their power needs to negotiate a more favourable price or service package from a retailer or other electricity supplier.

Alberta Energy and Utilities Board (EUB)

This independent agency of the Government of Alberta is responsible for ensuring that Alberta's resources are discovered, developed and delivered in a manner that is fair, responsible and in the public interest. The EUB regulates investor-owned natural gas, electric and water utilities to ensure that customers receive safe and reliable service at just and reasonable rates.

Alberta Government Services (AGS)

AGS works to foster a fair marketplace by providing timely, effective enforcement mechanisms to deter dishonest market practices and encourage consumer awareness.

Electric Energy & Standard Unit
1 watt = standard unit of electrical energy
1,000 watts = 1 kilowatt
1000 kilowatts = 1 megawatt (1,000,000 watts)
1,000 megawatts = 1 gigawatt (1,000,000,000 watts)

Alberta Securities Commission (ASC)

The ASC is the regulatory agency responsible for overseeing the capital market in Alberta and administering securities legislation. The Commission oversees the operations of a number of electronic trading systems, including the trading and clearing operations of the Alberta Watt Exchange.

Ancillary Services

System services to the Power Pool that are competitively obtained by the Transmission Administrator. They include reserve requirements, both spinning and non-spinning (powering up), and interruptible load services.

Balancing Pool

The Balancing Pool is a financial account managed by the Balancing Pool Administrator. For example, proceeds from the 2001 Power Purchase Arrangements (PPA) auctions were held in the Balancing Pool and returned to consumers via the 2001 Electricity Auction Rebate.

Capacity vs. Output

Any electricity generator has a maximum potential capacity, which is expressed in megawatts. The capacity reflects the number of megawatt hours the generating unit can produce each hour, although its output may be less than its maximum potential. For example, the watts (capacity) shown on a light bulb show the number of watts the light bulb will use each hour (output) it's turned on.

City Council

City councils serve as the regulatory authority for municipally owned electricity companies and as such, the Regulated Rate Option (RRO) rates in their service territory.

Co-generation

Co-generation is the combined production of electricity and useful heat. It is often employed at industrial plants where the heat or steam produced can be used in manufacturing processes and for general space heating. Electricity not used within the plant may be offered to the competitive market through the Power Pool of Alberta.

Default Supply

On January 1, 2001, consumers using more that 250,000 kWh of power per year and without a contract arrangement for electricity services were appointed to a default supplier/retailer. The electric energy charge for consumers on default pricing is, by regulation, based on Pool price.

Direct Sales Agreement

Under a direct sales agreement, independent power producers and Power Purchase Arrangement (PPA) holders may sell electricity directly to retailers, and some industrial and commercial consumers under agreed pricing terms and conditions. Buyers participating in direct sales must be able to satisfy certain standards set out in provincial regulations and Power Pool rules.

Distribution

The network (low-voltage power lines and related facilities) that delivers electricity from the transmission system to local consumers. Depending on who owns the wires, this service may be regulated by the Alberta Energy and Utilities Board (EUB), the local municipal government, or the Rural Electrification Associations (REA).

Distribution Wire Owners

Own the low-voltage power lines and related facilities that connect customer sites to the system. Distribution tariffs compensate wire owners for the costs of building and maintaining this distribution system and related activities such as metering and information systems.

Consists of:

- **2 investor owned utilities:**
  1. ATCO Electric Limited
  2. UtiliCorp
- **8 municipalities:**
  1. City of Edmonton – EPCOR
  2. City of Calgary – ENMAX
  3. City of Red Deer
  4. City of Lethbridge
  5. Town of Cardston
  6. Town of Fort Macleod
  7. Town of Ponoka
  8. The Municipality of Crowsnest Pass
- about **72 Rural Electrification Associations (REA)**.
- The City of Medicine Hat developed an independent electric power system and does not participate in the retail electricity market described in this document.

Energy Service Providers

These independent companies offer consumers advice, products and services to help them to manage their electricity costs. Improvements in energy efficiency, new technologies, contract evaluation and financial strategies are among the kinds of assistance available.

Exporters

Exporters sell power to customers outside Alberta.

Forward Market

The Watt Exchange operates a future trading market which provides buyers and sellers the option to trade power one month out, one quarter out and one year out.

Gigawatt (GW)

One billion watts.

Gigawatt-hour (GWh)

One billion watts of electric power flowing steadily for one hour.

Green Power

Green Power is electrical generation using renewable energy resources like the wind, sun and water or technologies that have minimal adverse effects on the environment. Although Green Power accounts for less than five per cent (5%) of all electricity generated in Alberta, its use continues to grow as more consumers become interested in this source or power.

Importers

Importers sell power into the Alberta market from sources outside provincial boundaries.

Independent Power Producer

An owner of a generating unit built after 1995. Power is produced primarily by generating units fired by either natural gas or by heat produced in industrial processes (co-generation). Hydroelectric units, diesel generators, plus wind turbines and other alternative methods also produce power.

Kilowatt-hour (kWh)

The amount of energy used by a load of 1,000 watts operating steadily for one hour. A typical household might use between 500 and 1,000 kWh of electricity per month, depending on the time of year and the energy efficiency of the home.

Load

The total electricity demand for service on the utility system at any given time. Alternatively, the demand for electricity by a single customer.

Load Classification

Grouping consumers by how much electricity they use.

Load Profile

An indication of how much electricity is consumed over which portion of the day. For example, an industrial business that operates 24 hour per day would have a flat load profile because the amount of electricity they use is consistent. A residential consumer's profile would have peaks – less electricity is consumed during the day when consumers are at work but their demand rises in the evening. Load profile can change from day to month to year.

Local Distribution Utility

Utilities that own or operate systems that distribute power to customers within a designated municipality or distribution area.

Marketers, Brokers, Traders

Marketers purchase the right to wholesale the output of individual generating units.

Market Achievement Plan (MAP)

The sale of the electrical generating capacity held in the Balancing Pool. MAP auction blocks as small as two megawatts were sold, making the capacity held by the Balancing Pool more attractive to a broad range of commercial and industrial investors.

Market Surveillance Administrator (MSA)

The MSA was established under the *Electric Utilities Act* and reports through the Power Pool Council. The MSA monitors Alberta's electricity market in the public interest, checking that it operates fairly, efficiently and in an openly competitive market. The MSA also monitors the behaviour of individual market participants and may take action as necessary to prevent market abuse.

Megawatt (MW)

One million watts. Amount of generating capacity needed to serve about 1,000 homes.

Megawatt-hour (MWh)

One million watts of electric power flowing for one hour. Amount of electrical energy 1,000 homes could use in one hour.

Merit Order

In trading electric energy, the Power Pool ranks the offers of generators in merit order according to price. Lowest offers are accepted first. Higher offers are brought into service as demand increases. Pool Price is determined by the price paid for the last unit of electricity purchased to meet demand.

National Energy Board (NEB)

The NEB is a federal agency established to promote safety, environmental protection and economic efficiency in the Canadian public interest while respecting individuals' rights. The NEB regulates the construction and operation of international power lines and exports of electricity and other energy resources in the interest of the Canadian public.

Peak Load (Energy Rush Hour)

The hours of highest daily, weekly or seasonal demand *or* electricity usage by all consumer classes. During the day, the peak load occurs between the hours of 4 p.m. and 7 p.m. This is because many businesses and public buildings are still open while people are also starting their evening routine at home, using power for lighting and to make dinner, for example.

Pool Price

The price at which energy is traded through the Real Time (Spot) Market at the Power Pool of Alberta. A separate price is determined for each hour of the day. It is based on the weighted average of the highest-priced generation units required to balance supply and demand during the hour.

Power Pool of Alberta

The Power Pool of Alberta is an independent, not-for-profit organization that serves several purposes. All electricity, whether generated in Alberta or imported, is dispatched through the Pool. In the real time market, the Pool matches demand with lowest cost supply and sets an hourly market price for electric power.

The major functions of the Power Pool are:

- To operate an open and competitive market for electricity in a fair, open and efficient manner.
- To operate Alberta's power system safely, reliably and economically and coordinate the operation of the interconnected provincial power grid with neighbouring jurisdictions.
- To monitor all aspects of Alberta's electricity market to ensure fair and open competition.

Power Pool Administrator

Responsible for running the Power Pool as an hourly electricity exchange spot market and for handling the financial settlement of exchanges through the Pool.

Power Pool Council

Independent members appointed by the Minister of Energy to monitor the performance of the Power Pool and set the rules of the Power Pool to promote an efficient, fair, and openly competitive market for electricity. The council has a broad mandate to conduct market surveillance and dispute resolution to ensure that the new markets are working efficiently and fairly.

Power Purchase Arrangement (PPA)

A long-term arrangement (maximum 20 years) for the electric energy output of each formerly regulated generating unit. PPA holders have the right to sell power generated at utility plants directly to customers or through the Power Pool. They make fixed and variable payments to owners of generating units based on the terms of the PPAs.

Power Purchase Arrangement Buyers

Organizations that have the right to sell power generated by utility generators. They make fixed and variable payments to owners of generating units based on the terms of the PPAs.

Real Time (Spot) Market

The Power Pool of Alberta exchange in which generation owners or Power Purchase Arrangement holders offer electricity to the market. Offers are accepted in relation to anticipated demand and clearing prices are set hourly on the basis of the marginal unit.

Regulated Rate Option (RRO)

During the transition to a fully competitive electricity marketplace, all consumers using less than 250,000 kWh of electricity per year and all farm rate class customers (regardless of consumption) have the option to buy electricity from a local distribution company at a rate set by the regulator.

Residential and farm rate consumers will have the option of the regulated rate until December 31, 2005. Other consumers, who use less than 250,000 kWh a year, will remain eligible for the RRO until December 31, 2003.

Retailers

Retailers sign up customers and sell electricity to them. They invoice their customers for the electricity and any other services based on agreed upon rates. Retailers may obtain their power through the Power Pool of Alberta via the real time (spot) market, PPA buyers, forward market, independent power producers, and from marketers.

Rural Electrification Association (REA)

REAs provide rural communities with support for their electrical needs and services. As wire owners, they operate and maintain their electrical distribution systems and provide the Regulated Rate Option (RRO) to their members. REA are also eligible to become licensed retailers.

Self - Retailers

Eligible consumers can obtain all or part of their power needs by contracting directly with independent power producers or holders of Power Purchase Arrangements or by purchasing from the Power Pool.

System Access Charge

The fee buyers and sellers pay to the Transmission Administrator to cover the integrated operations of the entire system. Includes the cost of power losses that occur through adjustments to dispatch instructions, operating reserve, plus system support services and access to transmission wires.

Transmission

The high voltage system of power lines and related facilities that transmits electricity from generating units to wire service providers or distributors. The Alberta Energy and Utilities Board (EUB) regulates Alberta's transmission system.

Transmission Administrator (TA)

The TA acts as a single transmission service agent for all transmission wire owners. The TA is accountable for ensuring system reliability and for ensuring open and non-discriminatory access to the interconnected transmission system by buyers and sellers. ESBI Alberta Ltd. is the appointed TA for Alberta.

The TA has two broadly defined functions:

- Planning (system access, reliability, ancillary services).
- Financial (tariffs, losses, procurement of reliability and ancillary services).

Transmission Facility Owners

Own the system of high-voltage power lines and related facilities that link generating units and customer loads throughout the province. Major transmission system owners are TransAlta, AltaLink, ATCO and EPCOR.

Utility Generators

Owners of electricity generating units built under the formerly regulated system remain responsible for operating and maintaining those units in the new, competitive market. They recover their fixed and variable costs (including a fair provision for return on investment) through Power Purchase Arrangements.

Volt-ampere (VA)

Is a measurement that calculates the power factor, also known as load or the amount of power that a system can process or use. Transmission and distribution lines measure the amount of power they can transmit or distribute in kilovolt-amps or 1,000 volt-amps. The symbol for **kilovolt-amps** is shown as **KVA**.

Watt (W)

The watt and its multiples are used as the common measurement unit of power for electrical, mechanical, hydraulic etc. purposes. It is defined as the power that produces energy at the rate of one joule per second (a joule is the work of a force of one newton moving one metre in the direction of the force).

Watt-hour (Wh)

One watt of power supplied to, or taken from, an electric current steadily for one hour.

Wire Service Providers

The owner of an electric distribution system may appoint a wire service provider to provide the Regulated Rate Option (RRO), operate and maintain electrical distribution systems, perform metering, maintain information systems and undertake financial settlement activities.

THE ELECTRICITY RESTRUCTURING TIME LINE

Alberta's electric industry structure evolved over time into a mix of investor owned and municipally owned utilities. Even so, prior to 1995, three utilities supplied more than 90 per cent of the power to the province's integrated power grid: investor-owned TransAlta Utilities Corporation; ATCO Electric (formerly Alberta Power); and, municipally owned Edmonton Power.

Each utility was a regulated monopoly. Each had a right and an obligation to provide distribution services to a particular geographical area. This required that customers "belong" to a particular utility, depending on where they were located. That traditional structure worked reasonably well, but regulation was slow, burdensome and expensive; the industry could not be fully responsive to consumer needs or developments in technology.

Government and stakeholders saw that the market could be opened to independent power producers and independent retailers as well as to both investor owned and publicly owned companies. Restructuring of the province's electric utility industry would bring competition to the industry's generation and retail services markets in place of regulation. Unleashing these competitive forces would increase incentives for efficiency, stimulate investment in new generation, eliminate future regulatory burden, promote customer-oriented service, put downward pressure on electricity prices and enhance the Alberta Advantage.

The first step in the process was the passage of the *Electric Utilities Act* in 1995. This *Act* created an open-access, competitive power pool through which electric energy is traded in the province. In addition it introduced an industry structure and regulatory reforms designed to increase efficiency in the electric industry.

1995 Electric Utilities Act

- To establish an efficient market for generation based on fair and open competition.
- To ensure that the benefits and costs associated with existing regulated plants continue to be shared equitably by current and future customers throughout the province.
- To ensure that investment in new generation is guided by competitive market forces.
- Where regulation was still necessary, to minimize its cost and provide incentives for efficiency.

1998 Electric Utilities Amendment Act

- To continue to regulate the high-voltage transmission system and local distribution systems since these operate most efficiently as monopolies.
- Complete deregulation of the generation market, creating incentives for efficient capital investment in generation and for efficient operation.
- To ensure a level playing field for all buyers and sellers of electricity so that customers benefit from open retail competition.
- To ensure fairness in all the changes to both customers who buy electricity and owners of existing regulated generating facilities. Owners will have a fair opportunity to recover the investments made in regulated generating plants. Customers will continue to receive the benefits from plants built under regulation.

1998

- Regulation completed empowering the Power Pool Council to undertake market surveillance and to enforce sanctions, without limit regarding dollar amount, against anti-competitive behaviour.
- Independent Transmission Administrator takes office after a competitive process takes place.
- Independent Assessment Team appointed, after a competitive bid process, to establish terms of long-term arrangements (Power Purchase Arrangements) for the remaining life of each generating unit built prior to 1996.

1999

- Department of Resource Development releases final recommendations on auction design and draft regulations for discussion on:
  - Financial qualifications and other eligibility requirements for participation in the Power Purchase Arrangements (PPA) auction.
  - Limits on PPA ownership and minimum bids in the auction.
- Independent Assessment Team submits final determination of long-term Power Purchase Arrangements.
- Alberta Energy and Utilities Board (EUB) approves long-term Power Purchase Arrangements to ensure that they are in the public interest.
- Design of Power Purchase Arrangement auction finalized.

- Balancing Pool is established to manage the financial accounts arising from the transition to a competitive generation market on behalf of Alberta electricity consumers.
- Customer choice begins for those who have time-of-use meters and the ability to take direction from the System Controller to alter their electrical loads.

2000

- Auction of Power Purchase Arrangements (PPA).
- Distribution tariffs to be charged to retailers using distribution wires are established.

2001

- Long-term Power Purchase Arrangements (PPA) began (2001-2020 maximum term).
- Customer choice introduced for all customers. Retail service competition began.
- Five-year Regulated Rate Option (RRO) introduced for home and farm customers; three years for small commercial and industrial customers.

2003

- Non-residential Regulated Rate Option (RRO) expires December 31, 2003.

2005

- Regulated Rate Option (RRO) for residential and farm rate class consumers expires December 31, 2005.

2020

- Power Purchase Arrangements (PPA) final date for all to end.

MONITORING THE NEW MARKET

The *Electric Utilities Amendment Act*, 1998 set up a number of new entities in order to oversee the fair and efficient operation of the competitive electricity marketplace in place of government regulation.

Power Pool Council

The Power Pool Council is an independent governing body with members appointed by the Minister of Energy. The council is responsible for making sure the Pool operates as an open, fair and efficient market for power. It establishes the rules by which the Pool operates, appoints the Pool Administrator and System Controller and is responsible for:

- Recommending changes to rules, laws or regulations that would serve to increase the efficiency and fairness of the markets.
- Determining and imposing sanctions on market participants found to be in violation of rules or engaging in anti-competitive practices.
- Setting up a binding process for dispute resolution.
- Reporting infractions of rules, laws or regulations to the appropriate authority.
- Determining and recovering the costs of running the non-profit Power Pool of Alberta.

Power Pool Administrator

The Power Pool Administrator carries out the financial transactions and administrative operations of the Pool. This includes:

- Managing the bid-offer process for supplying to and receiving electricity from the Pool.
- Scheduling system dispatch based on the selling prices offered.
- Carrying out all the financial settlements between buyers and sellers.

Market Surveillance Administrator (MSA)

The independent MSA (who is a member of the Power Pool Council) is responsible for:

- Monitoring the electricity markets to ensure efficient and fair operation and compliance with all rules, laws and regulations governing participants.
- Investigating complaints by market participants.
- Working with the Alberta Energy and Utilities Board (EUB) and the federal Competition Bureau to ensure compliance with market rules and practices.
- Proposing recommendations to the Power Pool Council regarding the disposition of complaints and improvements that could be made to rules and procedures.

System Controller

The system controller contributes to the safe, reliable and economic operation of the interconnected electric system. Responsibilities include:

- Scheduling units to provide ancillary services, such as operating reserve. This reserve is the additional generating capacity kept on the system in case of plant failure or unexpected surges in demand.
- Ensuring that electric power is dispatched.
- Aligning the exchange of electric energy and system services between Alberta and bordering jurisdictions.
- Ensuring that adequate levels of system support services are delivered to the system.

Transmission Administrator (TA)

The independent TA is appointed by the government to ensure non-discriminatory access to the market by all suppliers of power, buyers of power and ancillary services. Provides the overall coordination of the transmission system includes such functions as:

- Contracting with individual transmission owners to provide services.
- Acting as the financial clearinghouse between the buyers of transmission services (generators, distributors, importers and exporters) and the transmission owners.
- Setting province-wide tariffs for system access.
- Interacting with the Power Pool on issues such as the amount of generation needed for operating reserve (ancillary service s).

GOVERNMENT REGULATIONS IN THE NEW ELECTRICITY MARKETPLACE

The following are highlights of the many regulations established by the Alberta Department of Energy under the *Electric Utilities Act*. A complete listing can be accessed at **www.gov.ab.ca/pab/qpdevl/display_regs.cfm**.

Generators

Balancing Pool Regulation

- Authorizes the Balancing Pool Administrator to manage the Power Purchase Arrangements (PPA) held by the Balancing Pool.

Balancing Pool Allocation Regulation

- Requires that the proceeds from the Balancing Pool be allocated to Alberta consumers.

Wholesale Markets

Market Surveillance Regulation

- Authorizes the Market Surveillance Administrator to conduct monitoring and surveillance activities including initiating investigations into potential anti-competitive behaviour.

Direct Sales Regulation

- Proscribes the conditions for direct sales agreements and eligibility for participation in direct sale agreements.

Retail Market

Roles, Relationships and Responsibilities Regulation (Retailer Responsibilities)

- Sets out the rules that stakeholders, including retailers, must follow as they deal with each other and with consumers. This regulation also requires that all retailers providing electricity services to end-use customers register with Alberta Energy. Retailers serving consumers using less that 250,000 kWh per year must also register with Alberta Government Services.

Regulated Rate Option (RRO) Regulation

- Under the RRO all fees remain regulated by the appropriate regulatory authority.

Billing Regulation (Responsibility for Retail Billing)

- Establishes responsibility for retail billing and specifies certain items that must be included on all customers' bills.

Distribution Tariff Regulation
(Charges to Retailers for Distribution Access)

- Specifies the services that may be provided under wire owners' distribution tariffs, deadlines for preparing and filing the tariffs, and the maximum prudential requirements wire owners can impose.
- For investor-owned utilities (ATCO Electric and UtiliCorp Networks) the distribution tariff is scrutinized and approved by the Alberta Energy and Utilities Board (EUB). City councils approve tariffs of municipally owned utilities and Rural Electrification Associations (REA) boards approve the tariffs of REAs, unless these wires owners choose to apply to the EUB for approval of their distribution tariffs.

Code of Conduct Regulation (Affiliate Relations)

- Governs the relationship between a wire owner and its affiliated retailer and the release and exchange of customer information.
- Requires that:
  - (i) retailers and customers have equal access to regulated services;
  - (ii) owners protect the confidentiality of customer information;
  - (iii) retailers have equal access to information disclosed by owners; and
  - (iv) customers are dealt with fairly by affiliated retailers.

Electricity Marketing Regulation (Licensing of Retailers)

- Specifies the requirements for retailer licensing, the form of contracts between retailers and customers, a retailer code of conduct, and a disclosure statement. The text of this regulation under the *Alberta Fair Trade Act* is available at **www.gov.ab.ca/qp/ascii/regs/2000_109.txt**.
- In addition, a number of agencies function as industry watchdogs to protect the interests of consumers. They include:
  - The Alberta Energy and Utilities Board (EUB). This is an independent, quasi-judicial agency of the Alberta government. It will continue to regulate transmission and other areas that remain under regulation and will investigate and rule on regulated rate disputes and system access problems.

- Alberta Government Services, Consumer Affairs Division works to foster a fair marketplace by providing timely, effective enforcement mechanisms to deter dishonest market practices and by encouraging consumer awareness.
- The Alberta Securities Commission. It is responsible for the regulation of Alberta's capital market. It investigates suspected violations of its regulatory requirements and takes enforcement action where appropriate.
- The federal Competition Bureau oversees the administration and application of the *Competition Act* and investigates complaints.
- Under the federal *Electricity and Gas Inspection Act* and related regulations, all persons selling electricity based on units of measurement must register with Industry Canada. The Act and regulations are available at: **http://laws.justice.gc.ca/en/E-4/42826.html** or by calling Industry Canada at (403) 292-5605 or (780) 495-2491.

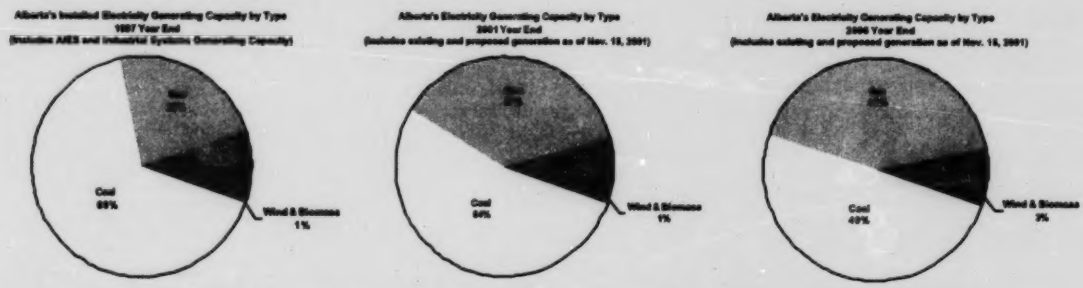
ELECTRICITY SUPPLY

Generation | Transmission & Distribution

ELECTRICITY GENERATION

- The Alberta government believes that a mix of renewable and non-renewable energy sources will best meet Alberta's future generation and environmental requirements. It does not support one type of power generation over another.
- The Alberta government has streamlined the way in which new electricity generation is brought on stream, while maintaining stringent environmental standards.
- The new electricity industry structure gives all electricity generators an equal opportunity in the generation market. Alberta's open market allows any company to bring on new generation as long as they can meet our environmental requirements. This gives Green Power producers an opportunity to compete in the market and to deal directly with customers who want to support Green Power.
- Alberta has been a Canadian leader in helping to launch the development of renewable energy through its involvement in the Small Power Research and Development Program. The program encouraged a wide range of renewable energy projects, including small hydro, wind, energy from biomass, peat and waste wood. This occurs together with the more conventional electricity produced in Alberta from thermal generators fuelled by coal and natural gas.
- New generation of over 2,000 megawatts (MW) was added to the Alberta power supply between 1998 and the end of 2001. An additional 5,500 MW of new power has been announced by industry for development between 2002 and 2006. Almost 1,300 MW of this new electricity generation is proposed or under development this year.
- Right now, installed capacity is about 11,600 MW. However, all that capacity is not continuously available to meet the demand. Peak demand in 2001 was 7,934 MW – up from 7,785 MW in 2000. Of the installed capacity, more than 10,000 MW is available to the Alberta Integrated Electrical System (AIES), including capacity that may be available on the interconnection lines with Saskatchewan and British Columbia.

Sources of Power Supply are Changing
(Generating Capacity by Type)



Coal

- Currently, there are proposals to develop nearly an additional 2,600 MW of higher efficiency, reduced-emission, coal-fired generation over the next five years.
- The Govemment is committed to supporting clean coal technology research, demonstration, and commercialization.
- Alberta coal is low in sulphur and burns cleaner than most coals found in other countries. Alberta has enough coal reserves for the next 800 years.
- Coal has a fundamental price advantage over all other fossil fuels and is currently available in Alberta at a low, stable price compared to other fossil fuels. At the same time, the capital costs and maintenance costs are relatively high for most coal-fired thermal generation electricity plants in Alberta, when compared with natural gas fueled generation.

Natural Gas

- Currently, there are proposals to develop an additional 900 MW of higher efficiency, lower-emission gas-fired generation over the next five years.
- Natural gas fired generation has the following advantages:
  - It is easier to locate gas-fired projects in different parts of the province because of the wide availability of gas pipelines.
  - Gas-fired projects can be built very quickly.
  - Gas-fired projects can be located closer to where the power is needed, reducing losses in the system and increasing reliability.
  - Gas-fired projects have lower capital costs. (At the same time, gas costs are market driven and can go up and down very quickly.)
  - Gas-fired projects have very predictable emissions.
  - Gas-fired generation has fast "peaking capacity" in that a gas-fired plant can ramp up very quickly.

Co-generation

- Currently, there are proposals to develop an additional 2,100 MW of co-generation projects over the next five years.
- Projects using co-generation—the combined production of electric power and useful heat—account for a large share of Alberta's new capacity. Now, co-generators can sell the electric power they produce through the Power Pool or as a direct sale.

- About 30 co-generation projects are operating now and more are on the way.
- Canada's largest co-generation plant is located in Joffre, Alberta. This 416 MW plant is one of the most efficient plants of its kind in the world. Surplus electricity is being sold into the Alberta system from this and other co-generation plants.

Hydro

- Currently, there are proposals to develop an additional 100 MW of hydroelectric generation over the next four years.
- TransAlta Utilities Corporation (TAC) owns and operates the 26 hydroelectric generating units located on the Bow and North Saskatchewan River systems.
- They make up about 800 MW of electric capacity.
- Most of the facilities are operated under *Alberta Water Act* licences.

Small Hydro

- In addition, Independent Power Producers brought on a number of small hydro projects under the Small Power Research and Development Act in the early 1990s. These include the Dickson Dam, Belly River Dam, St. Mary Dam and the Waterton Dam. Other projects include the Taylor Coulee Chute and the Oldman River development.

Wind

- Currently, there are proposals to develop an additional 200 MW of windpower generation over the next five years.
- We have a thriving windpower industry in southern Alberta. The first new generation in Alberta after the 1998 amendments to the *Electric Utilities Act* was a multi-turbine wind generation plant.
- Of the 600 MW in new generation projects scheduled for start-up in 2001, 50 MW are wind-generated. This more than doubles the province's current wind generation capacity.

Microturbines / Flare Gas

- In Alberta, microturbines and small engines have emerged as a solution for disposing of flare gas from gas or oil wells across the province. Waste gas from wells is now being captured before it is flared and used to generate electric power. A royalty waiver is now available on most solution gas when it is used to generate electric power, removing a key economic hurdle to small-scale mini-turbine electricity production and encouraging longer-term investments in new power generation.
- Microturbines are usually fueled by natural gas and typically generate between 25 and 400 kilowatts. They can be used either in stand-alone mode or connected to the power grid.
- Microturbines efficiently burn the flare gas with fewer emissions while providing a new energy supply. The Alberta flare gas reduction royalty program encourages the productive use of these gaseous hydrocarbons that would otherwise be burned (flared) at the well or processing site.

Biomass

- Biomass energy refers to those forms of energy that are derived from plant or animal material, such as wood, straw, peat or manure.
- For many years, people have used biomass stoves and furnaces for heating.
- Waste wood from forestry operations is a common fuel for biomass projects in Alberta.
- There currently are biomass fuelled electric generating plants in Whitecourt, Drayton Valley and Westlock.

Q & As – NEW GENERATION

Why is new generation important?

- The key to lower electricity prices in Alberta is increased generation.
- The Government of Alberta is committed to competitive generation and retail markets that will result in adequate supplies of electricity at competitive prices.

How much can we expect?

- New generation of over 2,000 megawatts (MW) was added to the Alberta power supply between 1998 and the end of 2001. An additional 5,500 MW of new power has been announced by industry for development between 2002 and 2006. Increased supply should push prices downward and improve system reliability.
- At present, installed capacity is about 11,600 MW. Peak demand in 2001 was 7,934 MW – up from 7,785 MW in 2000.

What kinds of generators will they be?

- By no longer limiting electricity generation to public utilities, deregulation has resulted in increased investment in co-generation, environmentally friendly "green power" sources such as biomass, hydro and wind generation, and more "traditional" thermal generation from Alberta's abundant natural resources, including our 800-year supply of clean-burning, low sulphur coal.

What are we doing to bring this power to the grid faster?

- The Alberta Energy and Utilities Board (EUB) is working with Alberta Environment and Alberta Energy to ensure new electricity generation comes on stream quickly while maintaining diligent public interest and environmental reviews.
- A project facilitator from government has been appointed to work with developers as they move their proposal through the various approval processes.

How soon can we expect results?

- About 600 MW of new generation are scheduled for start up in 2002 and about 1,000 MW may follow in 2003.
- The larger gas and coal-fired thermal generators now under development may take as long as five years to come on stream.
- ? Nevertheless, we are already seeing downward pressure on electricity prices. The average Power Pool Prices have dropped from a quarterly average of 22.3 ¢/kWh for the last quarter of 2000 to a quarterly average of 3.7 ¢/kWh for the last quarter of 2001.

How much "green power" is produced here in Alberta?

- Electric industry restructuring and the introduction of an open, competitive market for electric generation, has created new opportunities for environmentally friendly, green power generation such as biomass, hydro and wind power.
- As a result, new investment has flowed into green power generation and Alberta's electricity generation from green power has more than doubled. We now have 208 megawatts (MW) of green power electricity on line and more is planned.
- Total new green power generation planned and under development is expected to increase by 190 per cent to over 600 MW by 2005. About 400 new MW of green power are planned and under development including: almost 200 MW of wind power, 100 MW of small hydro power and 100 MW of biomass and wood waste green power generation.

Alberta Existing Generation Capacity[1]

Year End 2001 Capacity (Megawatts - MW)	Coal	Gas	Renewables*	Total Installed	Available To AIES
Generation – Utility Owned					
ATCO Electric	1,563	105	-	1,668	1,668
EPCOR	768	841	-	1,609	1,609
TransAlta	3,290	-	795	4,085	4,085
Emergency Capability					126
City of Medicine Hat	-	211	-	211	40
Sub-total	***5,621***	***1,157***	***795***	***7,573***	***7,528***
Generation – Independently Owned					
Industrial	-	950	-	950	100
Independent Power Producers	42	1,877	208	2,127	1,603
Sub-total	***42***	***2,827***	***208***	***3,077***	***1,703***
Interconnections					
British Columbia	-	-	-	800	800
Saskatchewan	-	-	-	150	150
Sub-total	-	-	-	***950***	***950***
Grand Total	**5,663**	**3,984**	**1,003**	**11,600**	**10,181**

* Includes hydro, wind and biomass.

This document is updated regularly and is available on the following Web site:
www.energy.gov.ab.ca/com/Electricity (Key Numbers)

[1] *Alberta Energy and Utilities Board statistics 1999 and Power Pool of Alberta statistics.*

KEY NUMBERS

Generation Additions 1998-2001[2]

Developer	Location	Installed Capacity (MW)	Type	Status
Air Liquide	Scotford	82	Co-generation	On-line
Amoco/ATCO Power	Primrose	84	Co-generation	On-line
API Grain Processors	Red Deer	3.5	Co-generation	On-line
ATCO	Poplar Hill	43	Gas Turbine	On-line
ATCO	Rainbow	91	Co-generation	On-line
ATCO	Valleyview	46	Natural Gas	On-line
BC Hydro	Fort Nelson	45	Gas Turbine	On-line
Canadian Gas & Electric	Drywood	6	Natural Gas	On-line
Canadian Hydro / EPCOR	Taylor Chute	12.8	Hydro	On-line
Canadian Hydro Developers	Cowley Ridge Expansion	26	Wind	On-line
City of Medicine Hat	Medicine Hat	25	Natural Gas	On-line
Collicutt Hanover Services	Red Deer	2	Co-generation	On-line
Columbia Power Systems	Red Earth Creek Area	4	Co-generation	On-line
Drayton Valley Power (Small Power R&D Program)	Dapp	17	Biomass	On-line
EPCOR / Peigan First Nation	Pincher Creek	0.9	Wind	On-line
Maxim Energy Corp.	Taber area	20	Co-generation	On-line
Northstone Power Corp.	Elmworth Area	15	Natural Gas	On-line
NOVA	Gold Creek	6.5	Waste Heat	On-line
NOVA / ATCO / EPCOR	Joffre	416	Co-generation	On-line
PanCan / Nexen	Balzac	106	Co-generation	On-line
PanCanadian	Cavalier	106	Co-generation	On-line
Syncrude Aurora	Fort McMurray	82	Co-generation	On-line
TransAlta	Dow Chemical Fort Saskatchewan	120	Co-generation	On-line
TransAlta	Suncor - Fort McMurray	360	Co-generation	On-line
TransAlta	Sundance Upgrades	42	Coal	On-line
TransCanada	Carseland	81	Co-generation	On-line
TransCanada	Redwater	42	Co-generation	On-line
TransCanada Power	Medicine Hat	46	Co-generation	On-line
U of A	Edmonton	25	Co-generation	On-line
Various Companies	Various	20	Flare Gas	On-line
Vision Quest	Pincher Creek	40.2	Wind	On-line
Total New Generation On-line (1998-2001)		**2,016**		Approx. 1,492 MW available to AIES

[2] *Industry information.*

Generation for 2002

Developer	Location	Installed Capacity (MW)	Type	Status
Confidential	Various	147	Natural Gas	2002
AES Calgary	Calgary area	350	Natural Gas	4Q 2002
Altec Power	Fort MacLeod	55	Co-generation	1Q 2002
ATCO Energen	Oldman	25	Hydro	2Q 2002
Canadian Gas & Electric	Drywood Exp.	8	Natural Gas	1Q 2002
Canfor / Canadian Gas & Electric	Grande Prairie	20	Waste Wood	1Q 2002
Shell / ATCO	Muskeg	170	Co-generation	3Q 2002
Shell / ATCO	Scotford	160	Co-generation	4Q 2002
TransAlta	Keephills Upgrades	30	Coal	2Q 2002
TransAlta	Sundance Upgrades	100	Coal	4Q 2002
TransCanada	Grande Prairie	80	Co-generation + Biomass	4Q 2002
Vision Quest	Waterton	25	Wind	4Q 2002
Wind Power Inc.	Pincher Creek	100	Wind	4Q 2002
Total for 2002 (Planned & Under Development)		**1,270**		Approx. 1,248 MW available to AIES

This document is updated regularly and is available on the following Web site:
www.energy.gov.ab.ca/com/Electricity (Key Numbers)

Generation Proposed 2003 – 2006

Developer	Location	Proposed Capacity (MW)	Type	Status
Confidential		30	Co-generation	4th quarter 2003
AES Calgary	Calgary area	175	Gas	4th quarter 2003
Benign Energy	Pincher Creek	65	Wind	1st quarter 2003
Calpine	Calgary	250	Natural Gas	1st quarter 2003
Imperial Oil	Cold Lake	160	Co-generation	4th quarter 2003
TransAlta	Sundance Upgrades	60	Coal	4th quarter 2003
Sub-total 2003		***740***		
TransCanada / PetroCan	Fort McMurray	170	Co-generation	3rd quarter 2004
PanCanadian	Medicine Hat	90	Co-generation	2004
Sub-total 2004		***260***		
EPCOR	Genesee	490	Coal	2005
Fording / ENMAX	Brooks area	1,000	Coal	2005-2006
Glacier Power	Dunvegan	80	Hydro	2005
Syncrude Aurora	Fort McMurray	238	Co-generation	Staged Development (complete 2005)
TransAlta	Keephills	900	Coal	2005
True North	Fort McMurray	80	Co-generation	2005
Sub-total 2005		***2,788***		
OPTI Canada	Fort McMurray	400	Co-generation	2004-2006
Sub-total 2006		***400***		
Total Generation Proposed (2003 – 2006)		**4,188**		Approx. 4,014 MW available to AIES
Total Generation Proposed (2002 – 2006)		**5,458**		Approx. 5,262 MW available to AIES

This document is updated regularly and is available on the following Web site:
www.energy.gov.ab.ca/com/Electricity (Key Numbers)

Imports/Exports[3]

	1999	2000	2001
Exports volume (MWh)	273,779	739,598	2.15 million
Exports value ($)	$4.3 million	$57.8 million	$156 million
Imports volume (MWh)	2,211,217	1,562,258	863,161
Imports value ($)	$135.5 million	$360.2 million	$62.4 million

Operations[4]

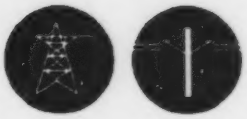
	1997	1998	1999	2000	2001
Peak demand (MW)	7,250	7,209	7,408	7,785[5]	7,934[6]
Max (peak) Pool price ($/MWh)	765.50	999.50	998.00	999.99	879.20
Average Pool Price ($/MWh)	20.39	33.08	42.74	133.22	71.29
Min (non-peak) Pool price ($/MWh)	3.68	5.15	5.76	5.84	5.82
Total energy traded (MWh)	101,105,000	102,920,000	102,844,735	108,027,908	108,917,474
No. of Power Pool participants	38	40	50	59	190

Customer Usage Estimates

	2000 Usage (GWh)	1999 Usage (GWh)	1998 Usage (GWh)
Residential	7,240	6,786	6,554
Farm	1,831	1,734	1,709
Commercial	13,430	12,980	12,881
Industrial	27,724	26,500	26,497
Total	**50,225**	**48,000**	**47,641**

[3] *Power Pool of Alberta statistics.*
[4] *Industry information.*
[5] *Dec. 12, 2000.*
[6] *Dec. 10, 2001.*

THE DELIVERY SYSTEM



Power is moved across the province to homes and businesses by a network of wires called transmission (high voltage) and distribution (low voltage) lines. Transmission lines are like a highway connecting generating facilities to communities and distribution lines are like the roads and lanes to individual sites.

Regulation

Building competing sets of wires across the province would result in unnecessary and expensive duplication, the costs of which would be passed on to consumers. Therefore, the transmission and distribution systems continue to be managed and regulated by the Alberta Energy and Utility Board (EUB) for the investor-owned companies, the municipal government for the city-owned companies, and the board of directors for Rural Electrification Associations (REA).

Transmission

The interconnected system of high voltage power lines and related facilities that link generating units and communities throughout the province were **built** and **maintained** by regulated utility companies. They retain **ownership** of these wires and related facilities under the new electric industry structure.

The Transmission Administrator (TA) manages the high voltage transmission system in Alberta. The TA "leases" the wires from owners who recover their costs under a province-wide transmission tariff schedule established by the TA and approved by the EUB. These financial arrangements also include system support, system access, line losses, and tie lines with neighbouring jurisdictions.

The TA is appointed by the provincial Cabinet and is fully regulated by the EUB.

Distribution

Distributors **operate** and **maintain** the low-voltage wire systems that take power from the transmission lines to individual customer sites. They also perform metering, maintain information systems, and undertake financial settlement with the TA.

The cities of Edmonton, Calgary, Red Deer and Lethbridge, the towns of Cardston, Fort Macleod, Ponoka, the Municipality of Crowsnest Pass and the local municipal government approves the distribution tariffs charged residents for electricity services. There are also about 72 REAs which own their own low-voltage distribution systems. The REA board of directors approves the associated distribution tariffs.

UtiliCorp Networks or ATCO Electric own the distribution systems for Alberta's remaining communities. The EUB regulates the distribution charges of these two investor-owned utilities.

Tie Lines

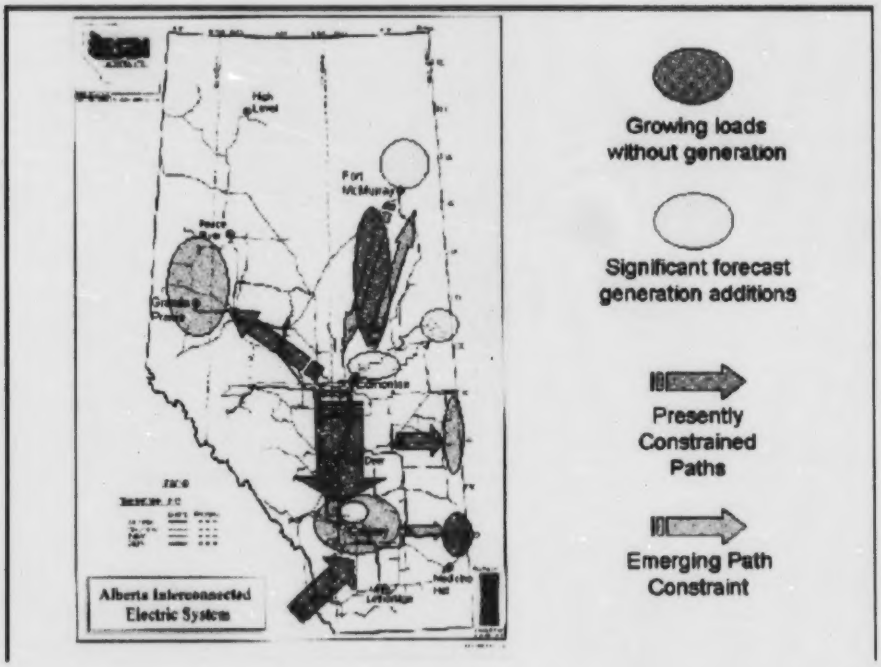
Alberta generators must supply local needs first and there are rules in place to ensure reliability of the province's electrical supply. However, when there is reduced demand in Alberta, power plants may sell the excess capacity to external market through the Power Pool of Alberta.

Power can flow both ways through these lines. The Alberta electricity system can obtain power when provincial supplies are tight and can profit from exports of power when there is a surplus situation. Even so, the volume of electricity that may enter or leave the province is limited. The only two routes are via an 800-megawatt line through the Crowsnest Pass to connect with B.C. Hydro, and a 150-megawatt connection to Saskatchewan. Sales to California or the Pacific Northwest must go through B.C.

Proposals for new transmission lines linking Alberta with the U.S. electrical grid through Montana and adding new interconnections with Saskatchewan are under consideration. The independent Transmission Administrator is involved in discussions with various parties to investigate such opportunities.

Developing inter-ties and interconnection power lines is a substantial undertaking that would take several years and millions of dollars to construct – once the necessary approvals and rights of way have been obtained. Obtaining the approvals and rights of way would be time-consuming and costly process in itself.

Transmission System Concerns



The pattern of Alberta's rapid economic growth has resulted in some constraints in transmission capacity in south, east and northwest Alberta, and with the growing popularity of co-generation at industrial sites, generation excesses in other parts of the province.

Plans to address the current stresses on the Alberta Integrated Electrical System (AIES) include:

- The Transmission Administrator's (TA) programs (IBOC-Invitation to Bid on Credits and LBC-SO - Locational Based Credits Standing Offer) encourage the development of generation near Calgary, Grande Prairie and Lloydminster to help reduce the transmission constraints in those regions;
- Increased transmission facilities in Calgary;
- New transmission substation near Fort Saskatchewan;
- New transmission line from Fort McMurray to Edmonton;
- Studying the upgrading of the Edmonton-Calgary corridor;
- New transmission line from west of Edmonton to Valleyview;
- New transmission line from Battle River Generation Station to Vermilion; and,
- New transmission from Wainwright to Edgerton.

The TA is responsible for providing transmission services as defined in the *Electric Utilities Act*, and is accountable for the reliability of the Alberta electric system. As such, the TA has the mandate for overall system planning.

WIRE OWNERS LIST

WIRE OWNER	CONTACT	PHONE NUMBER	E-MAIL
EPCOR	Shun Fung	(780) 412-4030	sfung@epcor-group.com
ENMAX	David Barry	(403) 301-2690	dbarry@enmax.com
ATCO Electric	Nap Pepin	(780) 420-4102	nap.pepin@atcoelectric.com
UtiliCorp	Blaine Virostek	(403) 514-4261	bviroste@utilicorp.com
Red Deer L&P	Al Roth	(403) 342-8274	alr@city.red-deer.ab.ca
Lethbridge Power	Otto Lenz	(403) 320-3946	olenz@city.lethbridge.ab.ca
Town of Ponoka	Keith Nesbitt	(403) 783-0147	keith@ponoka.org
Fort Macleod	Lane McLaren	(403) 553-4425	lane@fortmacleod.com
Cardston	Greg Burt	(403) 653-3366	gdburt@telusplanet.net
Crowsnest Pass	Richard Grams	(403) 562-8833	municnp@telusplanet.net
Alberta Federation of Rural Electrification Associations (AFREA)	Sandi Trohan	Edmonton (780) 417-3396 Toll free 1-877-717-3496	info@afrea.ab.ca
RESL	John Hermann	(403) 309-4211	johnh@telusplanet.net

THE WHOLESALE ELECTRICITY MARKET

ELECTRICITY: THE WHOLESALE MARKET

Power generated in Alberta is sold through the Power Pool of Alberta, which is an open-access competitive market for electric energy. Power can also be exchanged through forwards markets or direct sales arrangements. The Power Pool of Alberta co-ordinates all electricity sales and purchases in the province, as well as all energy imports and exports.

The Power Pool is also responsible for the safe and reliable operation of Alberta's electric system. As demand for electricity shifts up and down throughout the day, the Pool keeps supply and demand in balance by giving instructions to power suppliers and purchasers about the amount of energy that is to be supplied to or taken out of the system. Operating from the Pool's System Coordination Centre, Pool staff carry out this system control function 24-hours-a-day.

Wholesale (Spot) Market

- The Power Pool of Alberta operates a wholesale (spot) market whereby electricity prices are set for each hour of every day based on the highest priced unit dispatched during the hour to balance supply and demand in the system. This is often referred to as the "real time" market. The hourly price is commonly called the "Pool Price."

Forward Market

- Futures trading organizations, such as the Alberta Watt Exchange, offer power for sale on day ahead, one-month, one-quarter and one-year basis. This enables retailers and other electricity marketers to manage their exposure to the volatility of the hourly spot price. The longer-term forward market trading adds to market liquidity and the moderation of wholesale prices.

Direct Sales Agreement

- Under a direct sales agreement, buyers and sellers can agree on the terms of a sale with each other, rather than having to buy and sell electricity through the Power Pool. Direct sale agreements provide an additional avenue for smaller, independent power producers to sell their power.

Power Purchase Arrangements (PPA)

At present, the majority of Alberta's generating capacity (7,300 MW) is owned by ATCO Power, EPCOR and TransAlta. The rights to the output of these formerly rate-regulated units, in the form of Power Purchase Agreements (PPA), were auctioned to non-affiliated buyers in the summer of 2000. The PPA buyers are offering the PPA output into the Power Pool.

- The PPA buyer purchases the rights to certain volumes of electrical energy from a particular utility generating unit at a price determined at auction. In turn, the PPA buyer performs like an independent power producer and resells the electrical energy accordingly.
- PPAs were first auctioned in August 2000 under conditions such as 20-year terms. A few shorter-term PPAs were also sold.
- There are also shorter-term smaller-volume financial instruments derived from the PPAs auctioned under the Market Achievement Plan (MAP). The first MAP auction was held in December 2000 and a second is planned for 2002.
- The remainder of the province's domestic supply is generated by a number of industrial producers and small and independent power producers.

Imports/Exports

- There are rules in place to maintain the reliability and security of the Alberta power system. However, when there is reduced demand in Alberta and the power plants are running, it is important to have an external market.
- Power Pool of Alberta rules ensure that Alberta's needs will be met prior to any exports. Alberta can continue to be an electricity exporter while also ensuring that Alberta's needs – economic, environmental and social – are met.
- The only two routes to move electricity out of Alberta are via an 800-megawatt line through the Crowsnest Pass to connect with B.C. Hydro, and a 150-megawatt connection to Saskatchewan.

Q & As – THE POWER POOL OF ALBERTA

What is the Power Pool?

- The *Electric Utilities Act* stipulates that electricity traded in the province must be bought and sold through the Pool, an open-access, competitive market for electric energy.
- The Power Pool of Alberta has been operating since January 1, 1996. It is administered by an independent governing body with members appointed by the Minister of Energy based on their expertise and experience in areas such as business and information systems.

The role of the Power Pool is threefold:

1. To operate an open and competitive market for electricity in a fair, open and efficient manner.
2. To operate Alberta's power system safely, reliably and economically and coordinate the operation of the interconnected provincial power grid with neighbouring jurisdictions.
3. To monitor all aspects of Alberta's electricity market to ensure fair and open competition.

- Together with facilitating electricity trading, the Power Pool also oversees System Support Services such as the order of dispatching generators, spinning reserve, operating reserve, interruptible load, automatic generation control, power system stabilizers and other associated activities.

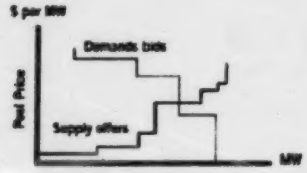
Who participates in the Power Pool?

- In 2001 there were 190 active participants in the wholesale market.
- Except for exempted industrial systems that produce power exclusively for "in-house" use and generators in remote locations not connected to the grid, all electrical energy sold into Alberta's interconnected grid is exchanged through the Power Pool of Alberta.
- At present, the majority of the demand in the province is not subject to the Hourly Pool Price, but is settled under long-term contracts. As such, wholesale prices may be determined through the wholesale (spot) market, forward market, direct sales agreements, Power Purchase Arrangements (PPA), and imports/exports. However, all sales are filed with the System Controller so that they can be scheduled as transactions on the power system.

How is the Hourly Pool Price determined?

- At its most basic, electricity is priced at the balancing point of supply and demand, as demonstrated by the Merit Order Chart. Lowest-cost generators are dispatched first and the more expensive ones are only brought in as necessary to handle a higher load.

Hourly Pool Price reflects market conditions



- Electricity prices are set every hour at the lowest price that brings on enough supply to meet the demand. When demand is low, the cost of electricity can be lower since only the lower-cost generators are running.
- Independent power producers, Power Purchase Arrangement buyers, the Balancing Pool Administrator and importers **offer** blocks of power into the pool at the prices they are willing to accept. Buyers place hourly **bids** to indicate how much power they are willing to buy at different prices.

And the price is?

- For each hour of every day the actual pool price is a weighted average of the marginal unit dispatched during the hour to balance supply and demand in the system.
- Power distributors take energy from the Pool and pay the declared hourly Pool price for the energy they buy.
- Buyers and sellers dealing with the Pool pay a trading charge along with system access fees that cover the cost of power losses that occur through these adjustments, plus system support services and access to transmission wires.

What have Pool Prices been lately?

- Wholesale (Spot) Market prices peaked in October of 2000. Power Pool prices have since dropped dramatically, largely due to lower natural gas prices, new generation and moderating demand. Alberta consumers can look forward to downward pressure on prices once the full benefits of deregulation, including new power supplies, come on stream.
- The weighted monthly average Power Pool price averaged 22.3 cents per kilowatt-hour (kWh) for the last quarter of 2000, 11.5 ¢/kWh for the first quarter of 2001, 8.9 ¢/kWh in the second quarter of 2001, and 4.5 ¢/kWh in the third quarter of 2001. Our year-to-date average for 2001 is 7.1 ¢/kWh.
- Forward prices from the Alberta Watt Exchange for the first quarter of 2002 and for the calendar year 2002 are consistent with this trend at 4.28 and 4.13 ¢/kWh respectively.

MONTH	MONTHLY WEIGHTED AVERAGE	POOL PRICE	QUARTERLY AVERAGE
October 2000	25.3 ¢/kWh	Average Q4-2000	22.3 ¢/kWh
November 2000	22.8 ¢/kWh		
December 2000	18.9 ¢/kWh		
January 2001	13.2 ¢/kWh		
February 2001	11.8 ¢/kWh		
March 2001	9.8 ¢/kWh	Average Q1-2001	11.5 ¢/kWh
April 2001	11.7 ¢/kWh		
May 2001	9.0 ¢/kWh		
June 2001	6.4 ¢/kWh	Average Q2-2001	8.9 ¢/kWh
July 2001	5.3 ¢/kWh		
August 2001	5.2 ¢/kWh		
September 2001	3.0 ¢/kWh	Average Q3-2001	4.5 ¢/kWh
October 2001	4.4 ¢/kWh		
November 2001	3.3 ¢/kWh		
December 2001	3.4 ¢/kWh	Average Q4-2001	3.7 ¢/kWh
Cumulative 2001		**7.1 ¢/kWh**	
January 2002	2.8 ¢/kWh		

What is the Balancing Pool?

- The Balancing Pool is a financial account shared by all electricity consumers in Alberta. It is overseen by the Balancing Pool of Alberta. The Balancing Pool receives the proceeds of Power Purchase Arrangements (PPA) and manages the unsold PPAs.

How is the Power Pool financed?

- The Power Pool of Alberta, a not-for-profit corporation created by the *Electric Utilities Act*, recovers its operating and capital costs through a trading charge on all megawatt hours exchanged through the Power Pool. The trading charge is set by the Power Pool Administrator and approved by the Power Pool Council.

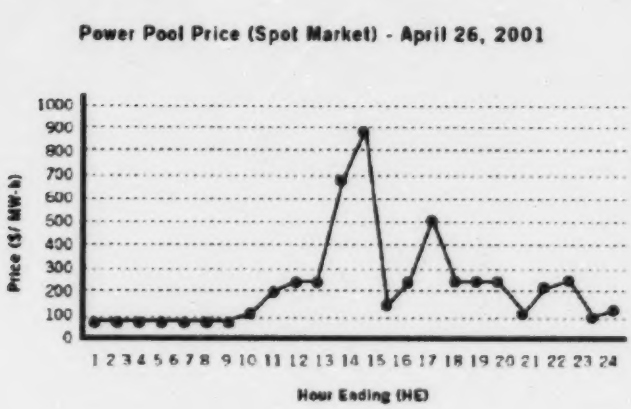
What rules are in place to prevent artificial price spikes in the spot market such as those that occur when a plant goes off-line?

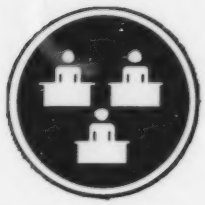
There are a number of checks and balances in place to "discourage" a generator from withholding capacity:

- Under the Power Purchase Arrangements (PPA) there is an Availability Incentive Payment clause that rewards a generator for high availability as well as a financial penalty for under-performing.
- Established monitoring criteria help the Market Surveillance Administrator (MSA) to detect any patterns of generator outages.
- Generators are required to file a report with the MSA regarding certain outages.
- The MSA may respond to requests from market participants for - or directly initiate - investigations into the behaviour of participants. The Power Pool Council can levy fines and issue sanctions to deter participants from engaging in such conduct.

Why is the Pool Price volatile?

- Hour by hour, day-by-day and season-by-season the demand, or load requirement, of the Alberta interconnected system changes. Supply also varies over time, as when a particular generator goes off-line for planned – or unplanned – maintenance. And as the supply and demand fluctuate, so does the Wholesale (Spot) Power Pool price.
- For example, on April 26, 2001, a day when there was already a lot of power off-line, a short-lived problem required that the Suncor (250 MW) generator shut down for a few hours. This proved to be the last straw in a very tight system: the price soared to $879.20 per megawatt hour for hour ending 13 (from noon to 1 p.m.).





CUSTOMER CHOICE

What choice is available?

- There are 20 electricity retailers registered to sell electric energy in the province. However, few are prepared to serve all levels of consumers in all parts of the province at this early stage in the evolving marketplace.
- Even so, in most parts of the province – including where there is just one supplier – consumers do have a choice between remaining on the service that went into effect on January 1, 2001 (default supply or regulated rate) and various contract terms offered by their current supplier.
- Right now, competitive retail offers are available to Albertans at all levels of electricity consumption. Retailers are now offering contracts to residential and other smaller customers, ranging from one, two, three and five years in length. People who want to exercise their right to choose at this early stage of the developing market can obtain information from government and retailers to help them make a more informed decision.

When can Albertans expect a wider range of choice?

- Right now, most of the existing retailers are focussing their marketing efforts on the largest of consumers. Of these, some will always restrict their business to high-volume industrial and commercial accounts. Others are expected to expand their retail efforts to include smaller volume non-residential consumers and homeowners over time.
- The list of electricity retailers competing for the opportunity to serve Albertans is expected to grow as the market develops.
- The Department of Energy has established the Retail Issues Sub-Committee through which electricity retailers, consumer representatives and government will work together to support a more competitive, active and vibrant Alberta electricity retail market.

With no experience, how can Albertans choose wisely?

- It is important to remember that 95 per cent of Alberta bills are eligible for the Regulated Rate Option (RRO). These consumers have **time to choose** (from three to five years). They have **lots of time** to learn about the new way of meeting their electricity needs and become comfortable with making a decision on electricity service.
- Residential bill payers and consumers on farm rate classifications may remain on the RRO until December 31, 2005. Other RRO eligible consumers, including non-profit groups, small multiple housing units and many businesses may remain on the RRO through to December 31, 2003.

- Government is committed to helping Albertans realize the benefits of the new, competitive electricity marketplace. The Department of Energy has established a Public Information Centre at (780) 427-0265 (toll free within Alberta by first dialling 310-0000). The department also mails "How to Shop" literature to callers upon request, maintains the Web site **www.customerchoice.gov.ab.ca** and provides workshops to interested consumer groups.
- A series of six information forums for business and agriculture were held throughout the province between October 22 and November 5, 2001. Those unable to attend these widely advertised seminars/trade show events may access information on the Internet at **www.customerchoice.gov.ab.ca**, or by calling (780) 427-0265 (toll free within Alberta by first dialling 310-0000).
- A copy of the "Comparison Shopping Worksheet" is included in this guide for reference.

What if the Regulated Rate Option (RRO) is not an option?

- The bottom-line difference for consumers over the RRO eligibility limit (250,000 kWh/year) is that they will be subject to price swings in the electricity market until they choose a contract provider.
- "How to Shop" literature and workshops are also available for higher-volume consumers. Even so, most businesses are familiar with contract agreements for supplies and services and are generally quite capable of pursuing arrangements to meet their electricity needs.

Comparative Shopping Worksheet

Identifying Your Energy Needs

This worksheet was designed to help you select an energy supplier that best fits your needs. The following questions will help you to understand what your energy needs are, and then compare offers from different energy suppliers to allow you to make an informed energy buying decision.

Check off the answers that best describe what you want from your energy supplier.

What is most important to me?

- ❑ Lowering my monthly electricity bill
- ❑ Obtaining budget certainty (fixed pricing plans)
- ❑ Choosing an environmentally friendly energy source
- ❑ Make fast and convenient buying decisions
- ❑ Stabilizing my monthly bill
- ❑ Bundling energy services together (gas & electricity)
- ❑ Speedy/friendly service
- ❑ Knowledgeable staff/accessible call centre

What options interests me the most?

- ❑ Negotiate a retail contract
- ❑ Buy from someone who specializes in energy sales (such as a broker/ a marketer*)
- ❑ Join a buying group, co-operative or association
- ❑ Negotiate directly with a generation company
- ❑ Invest in on-site generation

What contract structure to best fit my needs?

- ❑ Lock in a fixed price with a fixed term
- ❑ Float with a variable price in a short term contract (1-3 years)
- ❑ Float with a variable price in a long term contract (3-5 years)

Will my electricity needs change significantly in the coming years?

- ❑ New products, services or technology change how I use electricity
- ❑ Power requirements will increase
- ❑ Power requirements will decrease

Information I need from my present electricity supplier.

- ❑ I am currently paying a per kilowatt-hour (energy charge) of _____
- ❑ My average monthly kilowatt-hour use is _____
- ❑ My usage pattern Peak and off-peak consumption _____
- ❑ Exit fees and notification period _____
- ❑ Contact information for wire service provider _____
- ❑ Service charges, billing and administration fees _____

** Power marketers are engaged in buying and selling electricity, but may not own generating or transmission facilities. Power brokers match buyers and sellers.*

Evaluating Your Options

The table below may be used to organize the offers you receive. Remember to ask all energy suppliers (agents or retailers) for the information supplied here and it will help you to make the best choice to meet your needs. While you may not want answers to everything on the list, the more information you gather the better prepared you will be to make your decision.

Name of energy supplier:	
Contact name:	
Phone number:	
Energy supplier type (Agent/Retailer):	
References of supplier (e.g. existing customers, Better Business Bureau, credit references, etc.):	
Is there a basic service charge, even if I don't consume any electricity?	
What is the fixed rate?	
What is the variable rate?	
What is the energy charge per kilowatt-hour (kWh)?	
Are there price breaks for different levels of consumption?	
Any built-in price increases? If yes, amount and when.	$ _____ /kWh Date:
What are the retail service fees? Are there additional components to the energy charge? Unaccounted for energy: Pool service charge: Distribution loss charge:	
Is there a premium for green power?	
Terms of the agreement?	
What does the clause concerning supply interruption indicate?	
Does the price depend on the time of *year* that I consume electricity?	
Does the price depend on the time of *day* that I consume electricity?	
What is, if any, the switching fee or other up-front charges?	
What are the exit provisions for cancelling the contract?	
Are there meter-reading fees?	
How frequently will I be billed?	
Can you bill me at a regular date of my choice?	
Am I buying anything other than electricity?	
Are services available to help me use energy more efficiently? Who will inform the wire service provider about my new arrangement?	
Who do I call if I have questions or problems? Contact - retailer number:	
Is the price/supply tied to a specific generation plant? What occurs in the event of an outage at that plant?	
What price would I pay for electricity during the length of the outage?	

Who do I call about service issues?

- As with other goods and services, customer service – or the lack of it – is the responsibility of the retailer or wire service operator. The first place dissatisfied customers should call is the company involved.
- The Department of Energy has established the Retail Issues Sub-Committee through which electricity retailers, consumer representatives and government will work together to support a more competitive, active and vibrant Alberta electricity retail market. As the market evolves it will be increasingly important to retailers to compete on the basis of service as well as on price.

How often is my meter read?

- Meter reading is a utility responsibility. There is nothing in the legislation or the Province's regulations that require – or limit – the frequency of meter readings. Due to the costs involved, some meters in rural locations are read only once every six months.
- Billings based on a combination of an actual meter reading and an estimate of consumption is standard procedure when the actual reading date and billing cycle do not coincide; they rarely do.

The first place dissatisfied customers should call is the company involved.

- Distribution system owners are not obliged by provincial regulation to accept phone-in readings, but neither are they prohibited from doing so. Customers may want to contact their electricity retailer to determine a schedule of phone-in readings that would co-ordinate with their billing cycle.

Regulated Rate Option (RRO) customers of UtiliCorp Networks Corporation (UNC) should know that UNC is responsible for actual reads and provide meter data to EPCOR; EPCOR is responsible for billing estimates.

What if my bill seems wrong?

- Consumers should address these concerns directly to their retailer. Regulations require that a contact number be provided on consumer bills. Retailers are obliged to address these consumer complaints in accordance with their codes of conduct.

Who can I contact?

Questions about your 2002 electricity bill?	ATCO Electric	1-800-668-2248	**www.atcoelectric.com**
	ENMAX	310-2010 (toll-free in Alberta)	**www.enmax.com**
	EPCOR	310-4300 (toll-free in Alberta)	**www.epcor.ca**
	REAs or Prairie Power Ltd.	(780) 417-3396 1-877-717-3496 (toll-free in Alberta)	**www.afrca.ab.ca**

If my power goes out, who do I call?

- Outages and other problems related to the wires or the distribution system should be directed to the local distribution company – just as they always have. Again, regulations require that the distributor's contact number appear on consumer bills. A number for "power troubles" may often be found listed near the front of the local telephone directory along with emergency numbers.

Other concerns:

- All retailers offering electricity services to home, farm and smaller industrial and commercial consumers must be licensed by Alberta Government Services. Consumers can contact **Alberta Government Services** by calling the Consumer Information Centre at (780) 427-4088 (Edmonton) or 1-877-427-4088 (toll free).
- The **Alberta Energy and Utilities Board (EUB)** continues to oversee the activities of investor-owned utility companies and all retailers providing the **Regulated Rate Option (RRO)**. Consumers can contact the EUB at (780) 427-4903 or by using the toll-free Alberta Connects service (310-0000). Consumers may also visit their Web site at **EUB.Webmaster@eub.gov.ab.ca** for general contact about wells, hearings and utility concerns. Also, from the Webmaster link, inquiries are routed within the EUB to **utilities.concerns@eub.gov.ab.ca**.

ELECTRICITY RETAILERS IN ALBERTA

Name / Contact Information	Customers they intend to serve	Areas of Alberta they intend to serve	Licensed to serve small customers
1. Aquila Canada Corp contact: Allen Crowley phone: (403) 543-8102 fax: (403) 543-8115 e-mail: acrowley@utilicorp.com Web site: www.utilicorp.com	**Large Commercial / Industrial** (greater than 5 MW - approx. 30,000 MWh / year)	All	N/A *
2. BP Canada Energy Company contact: Jim Barker phone: (403) 233-1613 fax: (403) 233-5611 e-mail: barkerjr@bp.com	**Large Commercial / Industrial** (greater than 1 MW - approx. 7,000 MWh/year)	All	N/A *
3. Calpine Canada Power Holdings Ltd. contact: Ray Marchand phone: (403) 781-3137 fax: (403) 266-2337 e-mail: raym@calpinecanada.com	**Large Commercial / Industrial** (greater than 250 MWh annual consumption)	All	N/A *
4. Canadian Gas and Electric Company Ltd. contact: Guido Bachmann phone: (403) 298-8425 fax: (403) 265-0448 e-mail: guido@cgeco.com Web site: www.canadiangasandelectric.com	**Large Commercial / Industrial** (greater than 250 MWh annual consumption)	All	N/A *
5. Coral Energy Canada Inc. contact: Jim Chunn Greg Baden phone: Jim (403) 216-3555 Greg (403) 216-3567 fax: Jim (403) 716-3555 Greg (403) 716-3567 e-mail: jchunn@coral-energy.com gbaden@coral-energy.com Web site: www.Coral-Energy.com	**Large Commercial / Industrial** (greater than 250 MWh annual consumption)	All	N/A *
6. Duke Energy Marketing Limited Partnership contact: Jim Pollock Glenn MacIntyre phone: Jim (403) 297-9811 Glenn (403) 297-9884 fax: (403) 237-6021 e-mail: jdpollock@duke-energy.com gkmacintyre@duke-energy.com Web site: www.duke-energy.com	**Large Commercial / Industrial** (greater than 250 MWh annual consumption)	All	N/A *
7. Dynegy Canada Marketing and Trade contact: Mike Robinson phone: (403) 213-6026 fax: (403) 213-6044 e-mail: mfro@dynegy.com Web site: www.dynegy.com	**Large Commercial / Industrial** (greater than 250 MWh annual consumption)	All	N/A *

ELECTRICITY RETAILERS IN ALBERTA

Name / Contact Information	Customers they intend to serve	Areas of Alberta they intend to serve	Licensed to serve small customers
8. Encore Energy Solutions, L.P. contact: Joe Gysel phone: (403) 297-0344 fax: (403) 297-1665 e-mail: joeg@encoreenergy.com Web site: www.encoreenergy.com	**Large Commercial / Industrial** (greater than 250 MWh annual consumption)	All	N/A *
9. Engage Energy Canada L.P. contact: Rick Henschel phone: (780) 421-4909 fax: (780) 421-7029 e-mail: rick.henschel@engageenergy.com Web site: www.engageenergy.com	**Large Commercial / Industrial** (greater than 250 MWh annual consumption)	All	N/A *
10. Enmax Energy Corporation contact: Customer Care Centre toll free: 310-2010 fax: (403) 268-5189 e-mail: callcentre@enmax.com Web site: www.enmax.com	All	All	Yes
11. Enmax Energy Marketing Inc. contact: Customer Care Centre phone: (403) 232-1000 or toll free: 1-877-571-7111 fax: (403) 268-5189 e-mail: callcentre@enmax.com Web site: www.enmax.com	**Large Commercial / Industrial** (greater than 250 MWh annual consumption)	All	N/A *
12. EPCOR Energy Services Inc. contact: Customer Services phone: (780) 412-4000 or toll free: 310-4300 fax: (780) 412-4295 or toll free: 310-4295 e-mail: custserv@epcor.ca Web site: www.epcor.ca	All	All	Yes
13. IQ2 Power Corp. contact: Tom Dechert phone: Tom (403) 206-2826 Main (403) 206-2828 fax: (403) 206-2829 e-mail: tdechert@iq2power.com Web site: www.iq2power.com	**Large Commercial / Industrial** (greater than 250 MWh annual consumption)	All	N/A *
14. Maclaren Energy Inc. contact: Robert Desbois phone: (819) 986-4613 fax (819) 986-9029 e-mail: robedesb@energiemaclaren.com Web site: www.energiemaclaren.com	**Large Commercial / Industrial** (greater than 250 MWh annual consumption)	All	N/A *

ELECTRICITY RETAILERS IN ALBERTA

Name / Contact Information	Customers they intend to serve	Areas of Alberta they intend to serve	Licensed to serve small customers
15. Mariah Energy Corp. contact: Richard Adamsen phone: (403) 668-5088 fax: (403) 264-2881 e-mail: radamsen@mariahpower.com Web site: www.mariahpower.com	**Large Commercial / Industrial** (greater than 250 MWh annual consumption)	All	N/A *
16. Optimum Energy Management Inc. contact: Duane Reid-Carlson phone: (403) 215-6583 fax: (403) 215-6599 e-mail: duane.reid-carlson@oemi.com Web site: www.oemi.com	**Large Commercial / Industrial** (greater than 250 MWh annual consumption)	All	N/A *
17. PanCanadian Energy Services, a division of PanCanadian Petroleum Ltd. contact: Marie Gallant phone: (403) 268-6393 fax: (403) 268-3938 e-mail: marie_gallant@pcenergy.com	**Large Commercial / Industrial** (greater than 250 MWh annual consumption)	All	N/A *
18. Powerex Corp. contact: Kate Graeme (Marketing Manager) phone: (604) 891-6049 fax: (604) 891-5015 e-mail: kate.graeme@powerex.com Web site: www.powerex.com	**Large Commercial / Industrial** (greater than 250 MWh annual consumption)	All	N/A *
19. TransCanada Energy Ltd. contact: Chad Croteau phone: (403) 920-2084 fax: (403) 920-2362 e-mail: chad_croteau@transcanada.com Web site: www.transcanada.com	**Large Commercial / Industrial** (greater than 5 MW - approx. 30,000 MWh/year)	All	N/A *
20. Valeo Power Corporation contact: Darwin Gillies phone: (403) 770-1170 fax: (403) 770-1171 e-mail: darwin@valeopower.com Web site: www.albertaelectricity.com www.valeopower.com	**Large Commercial / Industrial** (greater than 250 MWh annual consumption)	All	N/A *
21. Vision Quest Windelectric Inc. contact: Jason Edworthy phone: (403) 289-4553 fax: (403) 282-1238 e-mail: sales@greenenergy.com Web site: www.greenenergy.com	All	All	-

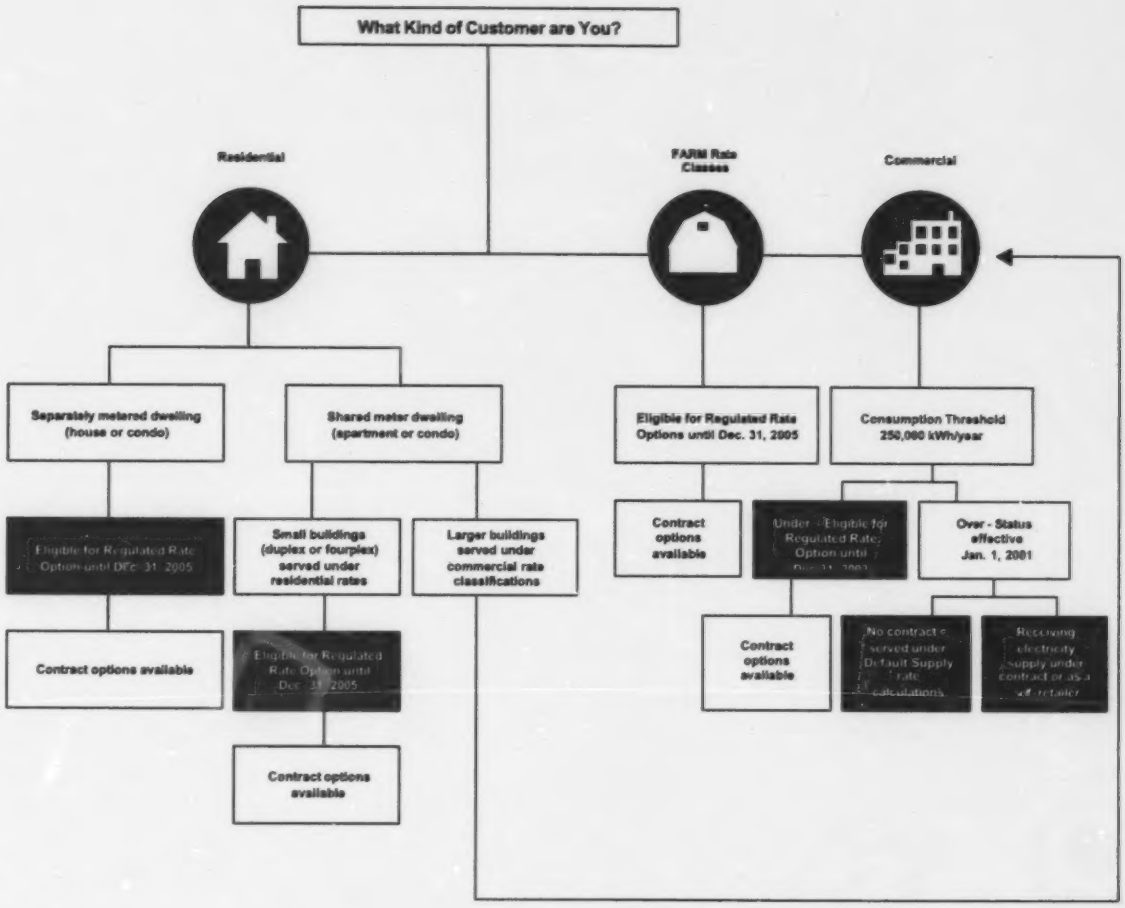
*** Licence not required if only selling to customers with an annual consumption greater than 250 MWh.**

CONSUMER INFORMATION

Rates | The "New" Electricity Bill

Consumer Handouts | 2001 Energy Cost Assistance

2002 ELECTRICITY RATE CATEGORIES


What Kind of Customer are You?
Residential
FARM Rate Classes
Commercial
Separately metered dwelling (house or condo)
Shared meter dwelling (apartment or condo)
Eligible for Regulated Rate Options until Dec. 31, 2005
Consumption Threshold 250,000 kWh/year
Eligible for Regulated Rate Option until Dec. 31, 2005
Small buildings (duplex or fourplex) served under residential rates
Larger buildings served under commercial rate classifications
Contract options available
Under - Eligible for Regulated Rate Option until
Over - Status effective Jan. 1, 2001
Contract options available
Eligible for Regulated Rate Option until Dec. 31, 2005
Contract options available
Contract options available
No contract - served under Default Supply rate calculations
Receiving electricity supply under contract or as a

Q & As – THE REGULATED RATE OPTION (RRO)

What is a regulated rate?

- A "regulated rate" is a set of charges for electricity services to customers that is approved by the appropriate regulatory body. All components of the regulated rate tariff – including the per kilowatt-hour electric energy charge and the non-energy components such as costs of transmission (high voltage) and distribution (local delivery) – are subject to regulatory approval.

What is the Regulated Rate Option (RRO)?

- On January 1, 2001, the retail electricity market was restructured to permit customer choice. However, the distribution utilities were required to continue offering service to most of their customers at a regulated rate. The RRO offers residential, farm, irrigation and small business consumers the opportunity to continue to purchase electricity at a regulated rate during the transition to a competitive electricity retail market.
- The RRO was automatically provided to all eligible customers who had not selected an alternative electricity retailer effective January 1, 2001. This provided continuity of service to RRO eligible customers.

Who is eligible to receive a regulated rate?

- All residential, farm and irrigation rate class accounts are eligible for the RRO regardless of their consumption levels.
- All other electricity consumers using less than 250,000 kilowatt hours (kWh) per year are eligible to receive service under the RRO.

How long will a Regulated Rate Option (RRO) be offered?

- Residential, farm, and irrigation rate class consumers will have the option of a regulated rate until December 31, 2005.
- Other consumers who use less than 250,000 kWh a year, mainly small industrial and commercial customers, remain eligible for the RRO until December 31, 2003.

Who provides service on the Regulated Rate Option (RRO)?

- The local distribution utilities (wire owners) are responsible for providing the RRO to eligible consumers in their service areas. Depending on where a consumer lives, this may be an investor-owned utility such as ATCO, a municipally owned utility such as EPCOR or ENMAX, or a Rural Electrification Association (REA).
- The local distribution utility may contract with another company to provide the RRO in their area. For example, EPCOR Energy Services provides the RRO to customers in the UtiliCorp service area. A company contracted to provide the RRO faces the same regulatory responsibilities as the wire owner would if it provided the RRO itself.

Why is the Regulated Rate Option (RRO) offered in a deregulated market?

- Phasing out the regulated system over three to five years will give consumers the time they need to learn about the options available from electricity retailers, and allow for a gradual transition to a completely competitive retail market.
- This transition in period also allows more time for new retail competitors to enter the marketplace with new products and service offers.

Why was the Regulated Rate Option (RRO) for 2001 prescribed?

- As the January 1, 2001 date for deregulation approached, we were seeing record high prices and volatility in both the natural gas and electricity markets. There was uncertainty surrounding 2001 electricity prices.
- The government prescribed a province wide energy charge of 11 ¢/kWh for the RRO for 2001 to remove this uncertainty and provide consumers with a stable billing rate through the first year of the restructured market. Eleven cents was determined to be a reasonable rate for both consumers and RRO providers.

How will the regulated rate be determined for 2002?

- The Government of Alberta will not set a province wide RRO energy charge after December 31, 2001. It is not necessary to do so, given the maturing of the market. RRO charges will be scrutinized and approved in each service area by the appropriate regulatory authority – the Alberta Energy and Utilities Board (EUB), municipal council, or REA board.

What will the 2002 Regulated Rate Option (RRO) energy charge be?

- RRO providers are now finalizing their regulated rate proposals for 2002. Their proposed energy charges will be scrutinized and approved by the appropriate regulatory authority – the Alberta Energy and Utilities Board (EUB), municipal councils or REA boards – depending on location and RRO provider. As a result, RRO energy charges (and overall rates) will vary among the different service areas.
- It will be the responsibility of each regulator to establish a fair energy charge for RRO customers of the utilities under their jurisdiction.

Who are the "regulators"?

- The regulated rate providers will file their RRO rate applications for approval by the appropriate regulatory authority.
- Investor-owned utilities (U tiliCorp and ATCO Electric) must file their regulated rate tariff with the Alberta Energy and Utilities Board (EUB) for approval.
- Municipal wire owners must have their regulated rate tariff approved by their municipal council. Alternatively, they may choose to file with the EUB for approval.
- Boards of directors of rural electrification associations are responsible for approval of their REAs' RROs.
- All providers must file their regulated rate tariffs with the EUB for information. For example, Calgary city council currently approves the RRO for ENMAX. The rates council approves must be filed with the EUB.

Who approves the Regulated Rate Option (RRO) charges?

- The Alberta Energy and Utilities Board (EUB) regulates investor-owned utilities.
- Municipally owned utilities are regulated by their city councils. Councils establish the energy charge and distribution charges included in RRO offerings.
- Municipalities that own utilities systems are Edmonton, Calgary, Red Deer, Lethbridge, Cardston, Fort MacLeod, Ponoka, and the Municipality of Crowsnest Pass.
- Either EPCOR or ENMAX are the designated RRO providers in these municipalities.
- The REA board of directors approves the RRO rates for their Rural Electrification Association.
- It is important to note that delivery (transmission) rates, tariffs and adjustments are fully regulated by the EUB, regardless of the status of the RRO provider.

Can consumers leave the regulated rate before the end of 2005?

- Yes. Competitive retail offers are now available to customers at all levels of consumption. Each approved RRO provider will specify the required notice period for consumers to leave the RRO without penalty. The notice period can vary between RRO providers. Contact your RRO provider for the notice period in your area.

What alternatives are available to eligible consumers?

- Retail electricity contracts offer fixed electricity prices for the duration of the contract. Most of Alberta's residential, farm and small business consumers now have retail options to the RRO service. See **www.customerchoice.gov.ab.ca** for a list of electricity retailers.

Where can consumers get more information?

- Further details about proposed 2002 RRO energy charges can be obtained from each RRO provider's customer service department, or from their Web sites. Providers' RRO applications to the EUB are public documents and may be obtained from EUB Information Services.

Questions about the 2002 Regulated Rate Option (RRO)?	ATCO Electric	(780) 420-7310	**www.atcoelectric.com**
	ENMAX	310-2010 (toll free in Alberta)	**www.enmax.com**
	EPCOR	310-4300 (toll free in Alberta)	**www.epcor.ca**
	REAs or Prairie Power Ltd.	(403) 227-4011	**www.afrea.ab.ca**
Questions about how the RRO is set?	Alberta Energy and Utilities Board (EUB)	(780) 427-4901	**www.eub.gov.ab.ca**
	Rural Electrification Association (REA)	1-877-717-3496	**www.afrea.ab.ca**
	Your city council	See Blue Pages in your phone book	

Is my Regulated Rate Option (RRO) bill subject to adjustments (or Rate Riders)?

- Those obtaining their power under the RRO – farms and residential customers until 2005, small businesses until 2003 – will continue to be responsible for the full cost of the service.
- In some cases the RRO provider may apply to the regulator for permission to adjust customer bills for differences between the actual costs of providing the regulated parts of the service and the approved rates.
- In 2002 some RRO providers may begin to collect from, or refund to, their customers the difference between the prescribed 11 cent RRO rate in 2001 and their actual cost of acquiring energy for the RRO in that year. RRO providers must have regulatory approval for these collections or refunds.

What is Default Supply?

- Owners of distribution systems were required to appoint a default retailer to provide customers in their service area with electricity services beginning January 1, 2001 where:
    1. The customer did not choose a retailer to provide electricity services beginning January 1, 2001.
    2. The customer was not eligible for the Regulated Rate Option (i.e., the customer's consumption was greater than 250,000 kWh per year).

Who is on Default Supply?

- About 13,000 sites were assigned to a default supplier/retailer as of January 1, 2001. Of these, approximately 7,500 sites continue to receive electricity on default supply.
- Customers will remain on default supply until they make other arrangements (e.g., sign a contract to provide their electricity services).

What is the default price?

- The per-kilowatt hour **electric energy charge** for consumers on default pricing is, by regulation, based on the Power Pool of Alberta prices. It must appear as a separate item on the bill.
- Depending on Power Pool prices, the default **electric energy charge** can be **higher or lower** than the energy charge approved under the Regulated Rate Option.
- The default retailer is required to file the default supply rate as well as the terms and conditions of service with the Alberta Energy and Utilities Board for information.
- Non-energy charges are not regulated for default customers (i.e., billing, retail margins, etc). For example, ATCO has a $600 one-time set-up fee and a $200 monthly administrative charge; however, ATCO has a significantly lower variable fee than ENMAX and EPCOR.

How is a customer's default price determined?

The **electric energy charge** that appears on a default customer's bill takes into account:

- The cost of the electricity purchased by the default retailer on behalf of the customer.

- This can vary between customers depending on their use pattern, or **load profile**. The cost calculation depends on the type of meter in service:
  - Interval meter customers are billed on an hourly basis and are charged the pool price for each hour multiplied by a customer's hourly consumption.
  - Cumulative, non-interval (ordinary) meter customers are charged the average pool price during the billing period based on an appropriate load profile for their class as determined by the regulated distributor.
  - Time-of-use meter customers billed on "peak" and "off peak" basis are charged based on the average Power Pool price during each period multiplied by their actual consumption of electric energy during each period.
- Distribution system losses: costs for energy lost during the delivery of power to a customer.
- Unaccounted for energy: allocated to all customers for differences in total system load and estimated hourly loads.
- Power Pool trading and related charges: costs incurred in purchasing power through the Power Pool of Alberta.

How does a customer leave Default Supply?

- Customers may decide to leave Default Supply at any time and purchase their electricity services in the open market by choosing among competing retailers. In order to avoid penalties, customers must give Default Supply at least three business days notice.

What are the main differences between Default Supply and the Regulated Rate Option (RRO)?

- Default customers are currently paying the market price for electric energy and they will **not** be subject to "adjustments" (positive or negative) on their bills at a later date due to fluctuating market prices.
- Conversely, RRO providers will be able to apply to the Alberta Energy and Utilities Board (EUB) or their city council or REA board, as their appointed regulator, for approval to recover (or refund) the amount by which the RRO may be different than their costs of providing the electric energy to customers. For example, any "difference" between the 2001 RRO of 11 ¢/kWh and actual 2001 market prices approved by the EUB will likely be applied to RRO customers' bills in 2002.

Q & As – RATE ADJUSTMENTS

What is a Deferral Account?

- A deferral account represents the difference between the actual costs incurred by the utility to provide electricity to its' customers and the approved regulated rate paid by consumers during a time period.
- In some cases, the utility may get approval from the appropriate regulator to adjust consumer bills in order to recover or refund the costs of providing past electricity service to consumers.
- An approved deferral account adjustment is commonly called a rate rider. Where warranted, rate riders will appear on future electricity bills in order to balance deferral accounts.

2000 Energy Rate Rider

Why were the 2000 energy Rate Riders Suspended?

- Deferral accounts resulted from higher than expected energy prices in 2000 and rate riders were to appear on consumer bills in 2001. These 2000 energy rate riders were suspended for one year as part of the transition to a restructured electrical marketplace.
- In view of rapidly increasing prices late in the year 2000, the government ordered the Alberta Energy and Utilities Board (EUB) to conduct a review of the deferral accounts and the associated rate riders, to ensure that the costs being sought by utilities are warranted.

What do consumers owe for 2000?

- Deferral accounts amounting to $676 million were submitted to the Alberta Energy and Utilities Board (EUB) for recovery.
- It is important to note that each utility experienced different cost differentials; therefore, the value of the 2000 energy rate riders will vary among service areas. This variance is due to the differing purchasing strategies used by the companies.

When will Consumers have to pay the 2000 energy Rate Riders?

- Upon review by the Alberta Energy and Utilities Board (EUB) and approval by the respective regulatory body, utility companies will be allowed to recover these approved charges over a one to three year period, beginning January 2002.
- Allowing for a recovery period of up to three years will help to cushion consumers from price fluctuations during the transition to a fully deregulated electricity market.

2001 Regulated Rate Option (RRO)

Why would 2001 Regulated Rate Option (RRO) Rate Riders be needed?

- In 2001, in some service areas, the actual costs of providing consumers with service under the RRO was higher or lower than the prescribed RRO energy charge of 11 cents per kilowatt hour (¢/kWh).
- RRO providers may apply to their regulator for approval to recover or refund the amount by which the cost of providing energy to consumers on the 2001 RRO is different than the prescribed rate of 11 ¢/kWh.
- Different RRO providers will have accrued different deferrals resulting in different riders. This means some consumers may see large riders, some low riders and some no rider at all. In fact, some consumers may be eligible for a refund from their utility.

How much of a Rate Rider do we expect for 2001?

- The need for riders due to differences between the actual cost to utilities for power in 2001 and the 2001 RRO energy charge of 11 ¢/kWh is subject to the approval of the appropriate regulatory authority.
- The amount of any such riders will depend on how each utility chose to meet its RRO obligations (contract or spot market prices). Different RRO providers will have accrued different deferrals resulting in different riders on bills in 2002.
- This means some consumers may see large riders, some low riders and some no rider at all. In fact, some consumers may be eligible for a refund from their utility.

Who will approve 2001 Riders?

- Before any difference between the RRO energy charges and the actual cost of energy for electricity provided to RRO customers in 2001 is approved, the amount must first be justified by the utility and approved by the Alberta Energy and Utilities Board (EUB) for ATCO customers and for EPCOR's customers outside the City of Edmonton.
- The city councils of Edmonton, Calgary, Red Deer, Lethbridge, Cardston, Fort MacLeod, Ponoka, Municipality of Crowsnest Pass will approve the RRO riders for consumers serviced by their municipally owned utilities. Either ENMAX or EPCOR are the designated RRO provider for these municipalities.
- The REA board of directors regulates Rural Electrification Associations.

Will consumers who leave the Regulated Rate Option (RRO) in 2002 be subject to the 2000 energy Rate Rider and the 2001 RRO Rate Rider?

- Consumers who choose to leave the RRO will still be required to pay rate riders associated with the 2000 energy deferral accounts and the 2001 RRO deferral accounts, as approved by the appropriate regulator.
- Non-RRO consumers pay the energy charge they agree to in their contract. Contract energy charges are not subject to future Rate Riders.

2002-2005 Regulated Rate Option (RRO)

Will we see RRO Rate Riders in the coming years?

- Those obtaining their electricity under the RRO – farms and residential customers until 2005, small businesses until 2003 – will continue to be responsible for the full cost of the service.
- When applying for RRO rate approvals, the provider must also have an energy purchasing plan approved. The RRO provider must follow this approved plan.
- The accuracy of the forecasts for the upcoming year and the manner in which each utility chooses to meet its RRO obligations (contract or spot market prices) will be key factors in the need, if any, for rate riders to RRO customers.

Who will approve the Regulated Rate Option (RRO) charges and any subsequent riders in future years?

- The Alberta Energy and Utilities Board (EUB) regulates investor-owned utilities.
- Municipally owned utilities, such as EPCOR and ENMAX, are regulated by their city council.
- The REA board of directors regulates Rural Electrification Associations.
- It is important to note that delivery (transmission) rates, tariffs and Riders are fully regulated by the EUB, regardless of the status of the RRO provider.

Q & As – THE "NEW" ELECTRICITY BILL

What are all these new charges on my electricity bill?

- There is a common misperception among Albertans that there were "new" fees imposed upon them as a result of deregulation. It is true that costs previously included in the energy charge are now identified and priced separately; however, these are not additional expenses. Today, consumer bills reflect the separation of electric service into its components – generation, delivery and retail services.

Why identify these items now?

- The new electricity marketplace gives Albertans "customer choice" – the right to make their own decisions around their financial arrangements for electricity purchases.
- To help consumers with comparison shopping, government required that retail electricity services be "unbundled," so that each may be considered separately.
- The "unbundling" of such charges is expected to lead to savings for consumers as electricity retailers strive to compete for customers.
- Many of the charges now identified separately remain subject to regulation and approval by various regulatory agencies.

What am I paying for?

While the terms may vary among retailers, the charges that appear on electricity bills include:

- *Energy Charge:* The cost of energy used in the billing period charged at cents per kilowatt hour (¢/kWh) of consumption
  - Under the Regulated Rate Option (RRO) all fees remain regulated by the appropriate regulatory authority.
  - Under Default Supply the energy charge is, by regulation, based on the Power Pool of Alberta prices.
  - The negotiated prices of electrical energy supplied under contracts between consumer and retailer are not regulated.
- *Retail Fixed Service Charge:* The basic fee set by the retailer for providing billing, customer service, call centre and other administrative services.

- *Distribution Charges:* The fees collected for transporting the electricity from the generator to the consumer. All electric utilities instituted distribution tariffs on January 1, 2001, when retail competition was introduced. Consumers have always paid for the costs of receiving power from the interconnected grid (wires, billing, metering and information systems).

  Distribution charges may appear on the bill as a fixed service charge, a variable (consumption-based or demand-based) charge, or both.

  These charges may be separated into local distribution and transmission (system access) components. Regardless of consumer classification or energy charge "type," the high-voltage transmission and low-voltage distribution systems remain regulated.

  - ATCO Electric and UtiliCorp must prepare distribution tariffs and have them approved by the Alberta Energy and Utilities Board (EUB).
  - Municipalities must prepare distribution tariffs and obtain the approval of their municipal council.
  - Rural Electrification Associations (REA) must prepare distribution tariffs and obtain the approval of their board of directors.
  - Municipal and REA distribution tariffs must also be filed with the EUB for information.

- *Municipal Franchise Fee:* The fee agreed upon by the municipality and the utility/wire service owner in return for utility rights-of-way including the exclusive right to construct, maintain and operate distribution systems serving the residents of the municipalities.

  The municipality establishes the rate with the approval of city council and is the beneficiary. In some cases the municipal Franchise Fee is collected as a percentage of the energy charge, resulting in a corresponding increase when prices rise. In other cases the fee is a flat rate based on consumption (¢/kWh), and is not subject to market price fluctuations.

- *GST:* The federal Goods and Services Tax is calculated based the total value of the bill, before the electricity rebate is deducted. This results in a corresponding increase when the energy charge or other components of the bill rise.

Your feedback is important. Contact us at:
Toll free: 310-4455
Internet: www.gov.ab.ca

Alberta Connects

What You Need To Know About Your 2002 Electricity Bill

The Alberta Government is committed to helping consumers make an informed transition to a competitive electricity marketplace.

The key to making good decisions in this new consumer marketplace is knowledge. Here's a look at some of the components of the 2002 residential Alberta electricity bill and what consumers should know about them.

Energy Charge

The cost of energy you used charged at cents per kilowatt hour (¢/kWh). Alberta residential consumers have the following rate options.

- Retail contracts – Retailers are offering one, two, three and/or five-year contracts with fixed prices. Consumers can benefit from stable predictable prices.
- Regulated Rate Option (RRO) – Available until December 31, 2005, to give residential customers enough time to learn about the new electricity marketplace before making their decision.
- Alberta's farm and small business consumers also have options that include fixed-term contracts and the RRO.

2000 Rate Rider

Where there was a difference between actual energy costs and the approved regulated rate in 2000, energy service providers applied to adjust consumer bills through rate riders. In 2000, the costs of providing service were much higher than the fees collected from consumers, resulting in a balance owed to the energy service providers. Upon review by the Alberta Energy and Utilities Board (EUB) and approval by the appropriate regulatory body, the 2000 rate riders will appear on most residential power bills for up to three years beginning early in 2002.

2001 Rate Rider

In 2001, the actual cost of providing RRO electricity service in some parts of the province was different than the prescribed RRO energy charge of 11¢/kWh. Legislation allows RRO providers to seek approval from their regulator to recover or refund this difference to consumers.

Upon review by the Alberta Energy and Utilities Board (EUB) and approval by the appropriate regulatory body, the 2001 rate riders will appear on most residential power bills for up to three years beginning in early 2002.

Some consumers may see large riders added to their bills. Others will see lower riders and some will pay no rider at all. Still others may be eligible for a 2001 RRO rate refund from their utility.

Retail Fixed Service Charge

The basic fee set by the retailer for providing billing, customer service, call centre and other administrative services.

Distribution Charges

The fees collected for transporting the electricity from the generator to the consumer. Regardless of consumer classification or energy charge, these regulated fees are collected by the retailer and passed on to the utility/wire service owner. Distribution charges may appear on the bill as a fixed service charge, a variable (consumption-based or demand-based) charge or both.

Municipal Franchise Fee

The fee agreed upon by the municipality and the utility or wire service owner in return for utility rights-of-way including the exclusive right to construct, maintain and operate distribution systems serving the residents of the municipalities.

Goods and Services Tax

The seven per cent (7%) federal GST is calculated based on the total value of the bill.

Where can consumers get more information?

Right now, competitive retail offers are available to most Albertans at all levels of electricity consumption. Even so, the Regulated Rate Option continues to provide lots of time for eligible consumers to learn about their options and for retail competition to increase.

Interested Albertans can obtain information from government and electricity retailers to help them make a more informed decision about their electricity service.

Questions about the 2002 Regulated Rate Option on your electricity bill?
ATCO Electric ..... 1-800-668-2248 www.atcoelectric.com
ENMAX ..... 310-3010 (toll-free in Alberta) www.enmax.com
EPCOR ..... 310-4300 (toll-free in Alberta) www.epcor.ca
Rural Electrification Association (REA)
or Prairie Power Ltd. ..... 1-877-717-3496 (toll-free in Alberta) www.area.ab.ca
Questions about how the RRO is set?
Alberta Energy and
Utilities Board (EUB) ..... (780) 427-4901 www.eub.gov.ab.ca
REAs ..... 1-877-717-3496 (toll-free in Alberta) www.area.ab.ca
Your day council ..... the Blue Pages in your phone book
Questions about Alberta's new electricity marketplace?
Alberta Dept of Energy ....(780) 427-0265 or 310-0000 toll-free in Alberta)
www.energy.gov.ab.ca
Information on how to choose between your electricity options?
Alberta Dept of Energy ...(780) 427-0265 or 310-0000 (toll-free in Alberta)
www.customerchoice.gov.ab.ca

For more information please visit our Web site at
www.customerchoice.gov.ab.ca

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Fact Sheet

Regulated Rate Option 2002

On January 1, 2001, the retail electricity market was restructured to permit customer choice. However, utilities were required to continue to provide service to their customers. The Regulated Rate Option (RRO) offers residential, farm, irrigation and small business consumers the opportunity to continue to purchase electricity at a regulated rate during the transition to a competitive electricity retail market. The RRO was automatically provided to all eligible customers who had not selected an alternative electricity retailer effective January 1, 2001. This provided continuity of service to RRO eligible customers. Phasing out the regulated system over three to five years will give consumers the time they need to learn about the options available from electricity retailers, and allow for a gradual transition to a completely competitive retail market. This transition period also allows more time for new retail competitors to enter the marketplace with new products and service offers.

Who is eligible to receive the Regulated Rate Option?

All residential, farm, and irrigation rate class accounts are eligible for the RRO regardless of their consumption levels. All other electricity consumers using less than 250,000 kilowatt hours (kWh) per year are eligible to receive service under the RRO.

Residential, farm, and irrigation rate class consumers can stay on the RRO until December 31, 2005. Other consumers who use less than 250,000 kWh a year remain eligible for the RRO until December 31, 2003.

Why was the RRO for 2001 prescribed?

As the January 1, 2001 date for deregulation approached, Alberta was seeing record high prices and volatility in both the natural gas and electricity markets. There was uncertainty surrounding 2001 electricity prices. The government prescribed an energy charge of 11¢ per kWh for the RRO for 2001 to remove this uncertainty and provide consumers with a stable billing rate through the first year of the restructured market. Eleven cents was determined to a reasonable rate for both consumers and RRO providers.

How will the regulated rate be determined?

The Government of Alberta will **not** set a province wide RRO energy charge after December 31, 2001. RRO providers are now finalizing their regulated rate proposals for 2002. As a result, RRO energy charges (and overall rates) will vary among the different service areas. It will be the responsibility of each regulator to establish a fair energy charge for RRO customers of the utilities under their jurisdiction.

Who approves the Regulated Rate Options?
The Alberta Energy and Utilities Board (AEUB) regulates investor-owned utilities. Municipally owned utilities are regulated by their City councils. Municipalities that own utilities systems are Edmonton, Calgary, Red Deer, Lethbridge, Cardston, Fort MacLeod, Ponoka and the Municipality of Crowsnest Pass. The REA board of directors approves the RRO rates for their Rural Electrification Association.

Can consumers leave the regulated rate before the end of 2005?
Yes. Competitive retail offers are now available to customers at all levels of consumption. Each approved RRO provider will specify the required notice period for consumers to leave the RRO without penalty. The notice period can vary between RRO providers. Contact your RRO provider for the notice period in your area.

What alternatives are available to eligible consumers?
Retail electricity contracts offer fixed electricity prices for the duration of the contract. Most of Alberta's residential, farm and small business consumers now have retail options to the RRO service. For a list of electricity retailers, see **www.customerchoice.gov.ab.ca**, or call the Alberta Energy Public Information Centre at (780) 427-0265. To call toll free, first dial 310-0000.

Where can consumers get more information?
Further details about proposed 2002 RRO energy charges can be obtained from each RRO provider's customer service department, or from their Web sites. RRO applications to the EUB are public documents and may be obtained from EUB Information Services.

Questions about the 2002 Regulated Rate or your electricity bill?	ATCO Electric	1-800-668-2248	**www.atcoelectric.com**
	ENMAX	310-2010 (toll-free in Alberta)	**www.enmax.com**
	EPCOR	310-4300 (toll-free in Alberta)	**www.epcor.ca**
	REAs or Prairie Power Ltd.	1-877-717-3496	**www.afrea.ab.ca**
Questions about how the RRO is set?	Alberta Energy and Utilities Board (EUB)	(780) 427-4901	**www.eub.gov.ab.ca**
	REA	1-877-717-3496	**www.afrea.ab.ca**
	Your city council	See Blue Pages in your phone book	

For more information, please visit the **www.customerchoice.gov.ab.ca** Web site, or call the Public Information Centre
(780) 427-0265
Toll Free: 310-0000

Alberta
ENERGY

Alberta ENERGY

Backgrounder

December 2001
Edmonton, Alberta

Deferral accounts, rate riders and your electricity bill

An important element of Alberta's restructured electricity marketplace is the freedom for customers to choose the energy provider and products that best suit their needs. The key to making informed decisions in this new consumer environment is knowledge.

Here's a look at some of the components of a typical residential Alberta electricity bill and what consumers should know about them.

Energy Charges
Alberta residential consumers are being offered a number of energy price options:

- Retail contracts – Retailers are offering one-, two-, three- and/or five-year contracts with fixed prices. Consumers can benefit from stable predictable prices.
- Regulated Rate Option – Available until 2005 to give residential customers enough time to learn about the new electricity marketplace before making their decision.

These charges are expressed in cents per kilowatt-hour (¢/kWh). Consumers can either let their power company bill consumption on a combination of actual and estimated usage figures or they can learn to read their meters to ensure their power company gets accurate consumption details.

Alberta's farm consumers also have options that include fixed-term contracts and the RRO.

2000 Rate Rider
The difference between actual energy costs and the approved regulated rate paid by consumers in 2000 resulted in sums owing to the energy service providers known as a deferral account. Individual shares of this account were to appear as rate riders on consumer bills in late 2000 and 2001. However, these **2000 rate riders** were suspended for one year as part of the transition to a restructured electricity marketplace.

Upon review by the Alberta Energy and Utilities Board (EUB) and approval by the appropriate regulatory body, the **2000 rate riders** will appear on an interim or final basis on most residential power bills for **up to** three years beginning early in 2002. **Some utilities may choose to include the 2000 rate rider in their basic energy charge.**

It is important to note that costs in 2000 varied among energy service providers due to different purchasing strategies employed by the companies. Therefore, the value of the **2000 rate riders** will vary among service areas.

2001 Rate Rider
In 2001, the actual cost of providing RRO electricity service in some parts of the province was different than the prescribed RRO energy charge of **11 cents per kilowatt-hour**. RRO providers applied for approval from their regulator to recover or refund this difference to consumers.

The province's RRO providers will have different deferral accounts resulting in different **2001 rate riders**. Some consumers may see large riders added to their bills. Others will see lower riders and some will pay no rider at all. Still others may be eligible for a 2001 RRO rate refund from their utility.

Upon review by the Alberta Energy and Utilities Board (EUB) and approval by the appropriate regulatory body, **the 2001 rate riders** will appear on an interim or final basis on most residential power bills for **up to** three years beginning in early 2002. **Some utilities may choose to include the 2001 rate rider in their basic energy charge.**

Retail Fixed Service Charge
The basic fee set by the retailer for providing billing, customer service, call centre and other administrative services.

Distribution Charges
The fees collected for transporting the electricity from the generator to the consumer. All electric utilities instituted distribution tariffs on January 1, 2001, when retail competition was introduced. Even so, consumers have always paid for the costs of receiving power from the interconnected grid (wires, billing, metering and information systems).

Distribution charges may appear on the bill as a fixed service charge, a variable (consumption-based or demand-based) charge or both.

These charges may be separated into local distribution and transmission (system access) components. Regardless of consumer classification or energy charge "type," the high-voltage transmission and low-voltage distribution systems remain regulated.

- ATCO Electric and UtiliCorp must prepare distribution tariffs and have them approved by the Alberta Energy and Utilities Board (EUB).
- Municipalities must prepare distribution tariffs, which must also be filed with the EUB for information. Final approval, however, rests with the respective municipal councils.
- Rural Electrification Associations (REA) must prepare distribution tariffs and obtain the approval of their board of directors.

Municipal Franchise Fee
The fee agreed upon by the municipality and the utility or wire service owner in return for utility rights-of-way including the exclusive right to construct, maintain and operate distribution systems serving the residents of the municipalities.

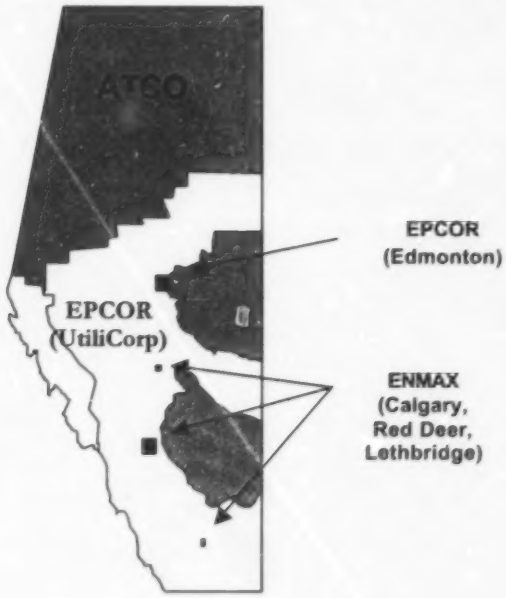
The municipality establishes the rate with the approval of the municipal council. In some cases the Municipal Franchise Fee is collected as a percentage of the energy charge, resulting in a corresponding increase when prices rise. In other cases, the fee is a flat rate based on consumption **(¢/kWh),** and is not subject to market price fluctuations.

Goods and Services Tax
The **seven per cent** federal GST is calculated based the total value of the bill. This results in a corresponding increase when the energy charge or other components of the bill rise.

Where can consumers get more information?

Questions about deferral accounts, rate riders or the 2002 Regulated Rate?	ATCO Electric	1-800-668-2248	**www.atcoelectric.com**
	ENMAX	310-2010 (toll-free in Alberta)	**www.enmax.com**
	EPCOR	310-4300 (toll-free in Alberta)	**www.epcor.ca**
	REA or Prairie Power Ltd.	1-877-717-3496	**www.afrea.ab.ca**
Questions about how deferral accounts are approved?	Alberta Energy and Utilities Board (EUB)	(780) 427-4901	**www.eub.gov.ab.ca**
	REA	1-877-717-3496	**www.afrea.ab.ca**
	Your city council	See Blue Pages in your phone book	
Questions about Alberta's new electricity marketplace?	Alberta Department of Energy	(780) 427-0265 310-0000 (toll-free in Alberta)	**www.energy.gov.ab.ca** **www.customerchoice.gov.ab.ca**

Major Wires Service Areas and Associated RRO Providers



Alberta ENERGY

Work Sheet

Comparative Shopping Worksheet

(A) Identifying Your Energy Needs

This worksheet was designed to help you select an energy supplier that best fits your needs. The following questions will help you to understand what your energy needs are, and then compare offers from different energy suppliers to allow you to make an informed energy buying decision.

Check off the answers that best describe what you want from your energy supplier.

What is most important to me?

- ☐ Lowering my monthly electricity bill
- ☐ Choosing an environmentally friendly energy source
- ☐ Make fast and convenient buying decisions
- ☐ Stabilizing my monthly bill
- ☐ Bundling energy services together (gas & electricity)
- ☐ Speedy/friendly service

What options do I have?

- ☐ Negotiate a retail contract
- ☐ Buy from someone who specializes in energy sales (such as a broker/ a marketer *)
- ☐ Join a buying group, co-operative or association
- ☐ Negotiate directly with a generation company
- ☐ Invest in on-site generation

How can I structure a contract to best fit my needs?

- ☐ Lock in a fixed price with a fixed term
- ☐ Float with a variable price in a short term contract (1-3 years)
- ☐ Float with a variable price in a long term contract (3-5 years)

Will my electricity needs change significantly in the coming years?

- ☐ New products, services or technology change how I use electricity
- ☐ Power requirements will increase
- ☐ Power requirements will decrease

Information I need from my present electricity supplier.

- ☐ I am currently paying a per kilowatt-hour (energy charge) of _____
- ☐ My average monthly kilowatt-hour use is _____
- ☐ My usage pattern Peak and off-peak consumption? _____
- ☐ Exit fees and notification period _____
- ☐ Contact information for wire service provider _____

* Power marketers are engaged in buying and selling electricity, but do not own generating or transmission facilities. Power brokers match buyers and sellers.

(B) Evaluating Your Options

Now that you have identified your needs, organize the offers you've received using the table below. Remember to ask all energy suppliers (agents or retailers) for the information supplied here and it will help you to make the best choice to meet your needs. List the following for each offer you've received.

	Company A	Company B	Company C
Name of energy supplier			
Contact name			
Phone number			
Energy supplier type (Agent/Retailer)			
References of supplier (e.g. Existing customers, Better Business Bureau, credit references, etc.)			
How do they acquire the energy for me? (PPAs, spot, market, etc.)			
What are the conditions of the agreement (i.e. fixed charges, rate per kilowatt-hour (kWh), any other charges)?			
What are the conditions of a variable charge?			
What are the conditions of a rate per kilowatt-hour (kWh)?			
What are the conditions of the delivery charge?			
What are the capacity charges?			
What are the fixed service charge (retail service fee)?			
What are the conditions of green power?			
Term of the agreement (i.e. For how long is it in effect?			
What is the shortest term offered by supplier?			
Rights of buyer and/or seller to cancel, penalties for cancellation, etc.)			
Are there connection fees or up-front charges? If so, what are they?			
What are the penalties for cancelling the contract?			
Any built-in price increases? If yes, amount and when.	$ __ /kWh Date:	$ __ /kWh Date:	$ __ /kWh Date:
Does the price depend on how much electricity I use?			
Does the price depend on when I consume electricity?			
If it is a variable price, how often does it change?			
Are there meter-reading fees?			
How frequently will I be billed?			
Can you bill me at a regular date of my choice?			
Is there a premium for "Green Power"?			
Am I buying anything other than electricity?			
Are services available to help me use energy more efficiently?			
Who will inform the wire service provider about my new arrangement?			
Who do I call if I have questions or problems? Contact: Retailer number			

Disclaimer

The contents of this worksheet are only suggestions of possible considerations for consumers. This worksheet is not intended to be a comprehensive guide nor is it a substitute for your own judgment. The Government of Alberta makes no warranty or representation of any kind in respect of the contents of this worksheet and has no liability for any damages that may be caused to any person in connection with or arising out of the use of this worksheet.

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Fact Sheet

Rate Riders

When the actual costs incurred by a utility to provide electricity to their customers differs from the approved regulated rate, the difference is called a deferral account. In some cases, the utility may get approval from the appropriate regulator to adjust consumer bills in order to refund or recover the costs of providing past electricity service to customers. An approved deferral account adjustment is commonly called a rate rider on customers' bills. Where warranted, rate riders will appear on future electricity bills in order to balance deferral accounts.

Why were the 2000 energy rate riders suspended?
Deferral accounts resulted from higher than expected energy prices in 2000 and rate riders were to appear on consumer bills in 2001. These 2000 energy rate riders were suspended for one year as part of the transition to a restructured electricity marketplace. In view of rapidly increasing prices late in the year 2000, the government ordered the Alberta Energy and Utilities Board (EUB) to conduct a review of the deferral accounts and the associated rate riders, to ensure that the costs being sought by utilities are warranted.

What do consumers owe for 2000?
It is important to note that each utility experienced different costs, therefore the value of the 2000 energy rate riders will vary among service areas. This variance is due to the differing purchasing strategies used by the companies.

When will consumers have to pay the 2000 energy rate riders?
Upon review by the EUB and approval by the appropriate regulatory body, utility companies will be allowed to recover these approved charges beginning January 2002. Some utilities may choose to include the 2000 rate rider in their basic energy charge.

Allowing for a recovery period of up to 3 years will help to cushion consumers from price fluctuations during the transition to a fully deregulated electricity market

Why would 2001 RRO rate riders be needed?
In 2001, the actual cost of providing Regulated Rate Option (RRO) electricity service was different than the prescribed RRO energy charge of 11 cents per kilowatt-hour (¢/kWh). RRO providers applied for approval from their regulator to recover or refund this difference on consumer bills. Different RRO providers will have accrued different deferral amounts resulting in different riders.

Who approves the rate riders?
Before any rate riders are approved, the amount must first be justified by the utility and approved by the EUB for ATCO customers and for EPCOR's customers outside the City of Edmonton. The city councils of Edmonton, Calgary, Red Deer, Lethbridge, Cardston, Fort MacLeod, Ponoka, and the Municipality of Crowsnest Pass will approve the rate riders for consumers serviced by their municipally owned utilities. The Rural Electrification Association's (REA) board of directors regulates REAs.

Some consumers may see large riders, some low riders and some no rider at all. In fact, some consumers may be eligible for a refund from their utility.

How much of a rate rider do we expect for 2001?
The need for "riders" due to differences between the actual cost to utilities for power in 2001 and the 2001 RRO energy charge of 11 ¢/kWh is subject to the approval of the appropriate regulatory authority. The amount of any such riders will depend on how each utility chose to meet its RRO obligations (contract or spot market prices). Some utilities may choose to include the 2000 rate rider in their basic energy charge.

Will consumers who leave the RRO in 2002 be subject to the 2000 energy rate rider and the 2001 RRO rate rider?
Consumers who choose to leave the RRO will still be required to pay rate riders associated with the 2000 energy deferral accounts and the 2001 RRO deferral accounts, as approved by the appropriate regulator. Non-RRO consumers pay the energy charge they agree to in their contract. Contract energy charges are not subject to future rate riders.

Will we see RRO rate riders in the coming years?
Those obtaining their electricity under the RRO will continue to be responsible for the full cost of the service. Residential, farm, and irrigation rate class consumers can stay on the RRO until December 31, 2005. Other consumers who use less than 250,000 kWh a year remain eligible for the RRO until December 31, 2003. Non-RRO consumers, those who have signed a contract with a provider or are on default supply, pay the energy charge they agree to in their contract. Contract energy charges are not subject to future rate riders.

Where can consumers get more information?

Questions about deferral accounts, rate riders or the 2002 Regulated Rate?	ATCO Electric	1-800-668-2248	**www.atcoelectric.com**
	ENMAX	310-2010 (toll-free in Alberta)	**www.enmax.com**
	EPCOR	310-4300 (toll-free in Alberta)	**www.epcor.ca**
	REA or Prairie Power Ltd.	1-877-717-3496	**www.afrea.ab.ca**
Questions about how deferral accounts are approved?	Alberta Energy and Utilities Board (EUB)	(780) 427-4901	**www.eub.gov.ab.ca**
	REA	1-877-717-3496	**www.afrea.ab.ca**
	Your city council	See Blue Pages in your phone book	
Questions about Alberta's new electricity marketplace?	Alberta Department of Energy	(780) 427-0265 310-0000 (toll-free in Alberta)	**www.energy.gov.ab.ca** **www.customerchoice.gov.ab.ca**

For more information, please visit the **www.customerchoice.gov.ab.ca** Web site, or call the Public Information Centre
(780) 427-0265
Toll Free: 310-0000

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The Natural Gas Price Protection Act (July 1, 2001)

- *The Natural Gas Price Protection Act*, passed in the Alberta Legislature during the Spring 2001 session, gives government the ability to keep Alberta gas competitively priced for the Alberta consumers and provides another way for Albertans to benefit from the natural gas reserves of our province.
- Government now has the legislated authority to use royalty revenues collected from natural gas producers to help Alberta consumers cope with the volatility of prices in the North American gas market.
- Future rebates will apply to most Alberta consumers, such as homeowners, landlords, condominium associations, businesses, non-profit agencies, schools, churches, health facilities, and municipal buildings. Propane and home heating fuel users will also be eligible.

2001 Electricity Auction Rebate (January 1 – December 31, 2001)

- Individually metered residential consumers, including condominiums and farm homes, received a monthly $40 credit on their electricity bill.
- All other consumers, including residences on shared-meter service (condominiums, apartment buildings, senior's residences), non-profit operations and businesses received a monthly rebate amounting to 3.6 ¢/kWh of electricity used.
- Consumers in the Farm Rate classifications were eligible for both the $40 monthly residential rebate per meter and the 3.6 ¢/kWh commercial rebate.

2001 Market Transition Credit (MTC) (January 1 – June 30, 2001)

- The MTC provided additional financial support to consumers on Default Supply. The credit was provided in addition to the 3.6 ¢/kWh Electricity Auction Rebate.
- The MTC was determined by the difference between the Monthly Weighted Average Pool Price and the 2001 Regulated Rate Option of 11 ¢/kWh, to a maximum of 4 ¢/kWh.
- The program was effective January 1 through June 30, 2001. However, it was only triggered for three of the six months. The MTC adjusted bills by 2.2 ¢/kWh in January, 0.8 ¢/kWh in February, and 7 ¢/kWh in April.

Summer 2001 Natural Gas Rebate (January 1 – April 30, 2001)

- Alberta Agriculture provided assistance for dehydrators, crop irrigators and greenhouses similar to what was provided to other consumers during the January 1-April 30, 2001 rebate program. The intent was to keep the after-rebate cost such seasonal users paid for natural gas, propane and fuel oil equitable for summer and winter users.
- More information is available by calling Alberta Connects toll-free at 310-4455 or by visiting the Web site at **www.agric.gov.ab.ca**.

Winter 2001 Natural Gas Rebate (January 1 – April 30, 2001)

- From January 1 to April 30, 2001, most Alberta natural gas consumers saw an automatic deduction on their natural gas bill. Overall the rebate brought natural gas costs down to a level similar to winter 2000.
- Albertans who own or rent a home, condominium or apartment and pay a natural gas bill for a separate meter received an automatic $150 deduction. An equivalent per-unit rebate was provided to multiple housing properties with four or fewer units.
- Other natural gas consumers, including multiple housing properties with more than four living units, received a rebate of $6.00 per gigajoule (GJ), to a maximum of 5,000 GJ per month per meter. This limit did not apply to gas used for residential heating, as in multiple housing properties.
- Condominium owners participating in shared meter billing plans were able to apply for funds to "top up" the $6.00/GJ commercial Natural Gas Rebate if the residential rebate equivalent of $150/unit/month was of greater benefit.
- Farms were eligible for both the $150 rebate per residence and the $6.00/GJ commercial rebate.
- Equivalent rebates were provided to consumers using propane or oil by application. Those who use electricity for space heating where natural gas is unavailable were also eligible.

Remote Area Heating Allowance Program (through March 31, 2003)

- Albertans living outside the franchise boundaries of a natural gas distributor may be eligible for a reduction on heating oil and propane purchases. The program is offered through to March 31, 2003.

Energy Tax Refund

- Albertan's 16 years of age or older who filed a 1999 Income Tax form were eligible to receive the $300 tax refund.

Emergency Benefit for Albertans Facing Utility Disconnection

- Alberta Human Resources and Employment helped cover past due utility and reconnection fees for low-income Albertans who received disconnection notices from their utility company for costs incurred before April 30, 2001.
- Applicants were required to go through the Supports for Independence (SFI/welfare) intake process to confirm eligibility for benefits.

School Jurisdictions and Post-secondary Institutions

- The Government provided **$55 million** in relief for energy to school boards and post-secondary institutions - **$20 million** in the form of Alberta Municipal Financing Corporation rebate and **$35 million** from general revenues.
- All 64 school boards, all 26 post-secondary institutions and 11 charter schools receive funding based on their proportion of the 1999/2000 total energy funding allotment.